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REHABILITATION PROTOCOL- Shoulder arthroscopic posterior labral repair

The rehabilitation guidelines are presented in a criterion based progression program. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, associated injuries, pre-injury health status, rehab compliance, tissue quality and injury severity. Specific time frames, restrictions, and precautions may also be given to protect healing tissues and the surgical repair/reconstruction. It should not be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam findings, individual progress, and/or the presence of post-operative complications. The therapist should consult the referring physician with any questions or concerns.

Special attention must be given to impairments that caused the initial problem. For example, if the patient is s/p partial medial meniscectomy and they have a varus alignment, post-operative rehabilitation should include correcting muscle imbalances or postures that create medial compartment stress.

INDIVIDUAL CONSIDERATIONS: S/p

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PHASE 1- Surgery to 2 weeks

REHAB GOALS	1. Protection of the post-surgical repair 2. Emphasize importance of sling usage 3. Minimize swelling & pain
PRECAUTIONS	1. Sling immobilization for 6 weeks, use at all times except bathing & ROM exercises 2. ROM precautions: IR to 0, humeral elevation in scapular plane 90, adduction 0, abduction 90, ER 30 3. Cryocuff 3-5 times per day for 20 minutes and ice after every therapy session once splint removed 4. No lifting or carrying objects
RANGE OF MOTION EXERCISES	○ Active & passive elbow, wrist, hand ROM, ball squeeze, gripping ○ Supported Codman exercises ○ No stretching at this time
SUGGESTED THERAPEUTIC EXERCISES	○ As above ○ Week 2- LE and core strengthening with sling on at all times
CARDIOVASCULAR EXERCISE	None

PROGRESSION CRITERIA	○ Minimal/no pain ○ 100% sling compliance ○ No signs of repair failure ○ Wound healing

PHASE 2- 3-6weeks

REHAB GOALS	1. Protection of the post-surgical repair 2. Prevent contracture of hand/wrist/elbow 3. Minimize pain and swelling
PRECAUTIONS	1. Sling immobilization for 6 weeks, use at all times except bathing & ROM exercises 2. ROM precautions: Weeks 3 & 4-IR to 0, humeral elevation in scapular plane 120, adduction 0, abduction 100, ER 30, flexion 90. Weeks 5 & 6- IR to 0, humeral elevation in scapular plane 140, adduction 0, abduction 120, ER 45, flexion 120. 3. No horizontal adduction or IR for 6 weeks 4. Cryocuff 20 minutes as needed and ice after every therapy session 5. No lifting or carrying objects. Avoid posterior shoulder/capsular stress
RANGE OF MOTION EXERCISES	○ Continue phase 1 exercises ○ ROM restrictions: as above ○ No mobilizations ○ Table slides, physio ball rolling within ROM precautions ○ AROM- scapular clocks & scapular dumps ○ Active assist ROM w/pulleys- can begin after week 4 as long as correct technique demonstrated. Can include flexion & abduction via wands & wall walks with cues to avoid compensatory shoulder shrugs as long as passive ROM to 120 in scapular plane.
SUGGESTED THERAPEUTIC EXERCISES	○ Continue phase 1 exercises ○ Submaximal isometrics in neutral rotation & <30 abduction w/ elbow flexed to 90 for flexion, abduction, ER, extension ○ T bar/cane exercises supine for active assist ROM within precautions ○ Core & hip isometrics ○ Higher level athletes may begin single LE balance with head movements, functional 1/3 squats, step ups/downs and stationary lunges ○ Scapular squeezes/pinches without resistance
CARDIOVASCULAR EXERCISE	Stationary bike at week 3 while wearing sling at all times
PROGRESSION CRITERIA	○ No swelling or pain. No signs/symptoms of instability ○ Elbow, wrist & hand ROM equal to contralateral ○ Active ROM without scapular compensations to 140 scapular elevation, ER 30

	○ PROM per ROM guidelines

PHASE 3- 7-10 weeks postop

REHAB GOALS	○ Protect surgical repair ○ Gradual restoration of ROM ○ Improve scapular, cuff strength ○ Normalize trunk & kinetic chain
PRECAUTIONS	○ ROM limitations- IR 70, ER 90, adduction 20, scapular elevation 160, flexion 160, abduction 160 ○ Discontinue sling use ○ Avoid forced horizontal adduction & axial loading with arm past neutral adduction
RANGE OF MOTION EXERCISES	○ Continue exercises from phase 2. ○ Very gentle Mobilizations as needed ○ ROM limitations as above, progress to full scaption, abduction, flexion ○ Continue passive ROM in scapular plane. Flexion & IR/ER at 45 of abduction introduced as pain tolerates
SUGGESTED THERAPEUTIC EXERCISES	○ Continue exercises from phase 2 ○ LE & core- progress strengthening ○ Scapular strengthening- Depression w/light resistance bands, Prone W, I, Y and Ts, prone rows, standing forward and lateral raises (open can), supine punches, wall slides, scapular pinches, bilateral shoulder ER with elbow flexed to 90, neutral abduction ○ Rotator cuff strengthening- Side lying ER, standing IR/ER with light resistance tubing (do not exceed 30 of abduction/IR) ○ Light biceps/triceps strengthening ○ Rhythmic stabilization of UE ○ Progress manual strengthening to serratus, cuff, scapular (supine, side lying D1 & D2, slow reversals) ○ Scapular PNF- supine, progress to side lying, seated, standing ○ Closed chain-lightweight medicine ball rotations at 90 scapular elevation progress to 90 forward flexion against wall & standing UE wt bearing w/ weight shifting on table w/hands at least 1.5x width to minimize posterior stress ○ Week 8- body blade at 0 abduction & 90 scapular elevation. ○ Week 9-Also can add light weights to scapular elevation & flexion (open can) ○ Week 10- Seated press ups for lats
CARDIOVASCULAR EXERCISE	Stationary bike increasing resistance, treadmill walking Week 9-stairmaster, advance to elliptical (no upper body) UBE as tolerated, aqua therapy as needed
PROGRESSION	○ Active ROM 150 scapular elevation, 45 ER, IR to L1

CRITERIA	○ Passive ROM IR 70 at 90 abduction ○ No pain or swelling ○ Normal glenohumeral & scapulothoracic mechanics

PHASE 4- 11-14 weeks postop

REHAB GOALS	○ Full ROM in all planes ○ 80% strength of contralateral ○ Improvement of strength, endurance, neuromuscular control
PRECAUTIONS	Post-activity soreness should resolve within 24 hours Avoid post activity swelling Avoid forced horizontal adduction & axial loading with arm past neutral adduction Avoid lockout of elbows and hand width less than shoulder width during closed chain strengthening
RANGE OF MOTION EXERCISES	○ Continue with flexibility exercises from previous phase ○ Gentle rend range stretching ○ Lat, pec stretches ○ LE and core flexibility ○ 12 weeks- Posterior shoulder stretching- horizontal adduction, sleepers
SUGGESTED THERAPEUTIC EXERCISES	○ Continue phase 3 activities ○ thrower's exercises: ER/IR at 0 abduction (progress to IR/ER at 90 if no pain), scaption ER full can, rows into ER at 90 abduction seated on stability ball, lower trap seated on stability ball, elbow flexion, elbow extension/triceps, wrist extension, wrist flexion, supination, pronation, sleeper stretch, supine horizontal adduction stretch into IR, Prone horizontal abduction neutral/full ER at 100, prone row, Diagonal pattern (D2) flexion/extension ○ Lat pulldowns, bent over rows ○ PNF D1 and D2 ○ Closed chain- wall pushups ○ Balance/proprioception- progress to unstable surface, perturbations, etc ○ Plyometrics- LE drills, UE wall dribble, plyoback/rebounder (chest pass, ER/IR ball toss & catch) ○ Sport specific- LE drills in controlled environment at week 12
CARDIOVASCULAR EXERCISE	Continue from phase 3, add upper body ergometer if needed. Walk/jog progression at week 12
PROGRESSION CRITERIA	○ Normal kinematics of GH & ST joints ○ Full painless active & passive ROM ○ Strength 80% contralateral

PHASE 5- 15-24 weeks

REHAB GOALS	○ Continue strengthening ○ Full pain free ROM ○ Good core & LE strength & stability ○ 85% strength of contralateral
PRECAUTIONS	○ Post-activity soreness should resolve within 24 hours ○ Caution with progression if inadequate core stability/scapulothoracic control/rotator cuff strength present ○ Avoid forced horizontal adduction & axial loading with arm past neutral adduction ○ Avoid lockout of elbows and hand width less than shoulder width during closed chain strengthening
RANGE OF MOTION EXERCISES	○ Continue with flexibility exercises
SUGGESTED THERAPEUTIC EXERCISES	○ Progress strengthening from phase 4 ○ Open chain- upright rows, seated rows, lateral & front raises, throwers exercises, tubing fencing, step & punch, plate push, pool resisted motions ○ Closed chain- side planks, front planks, weight shifts, figure 8s on slide board in quadruped/standing. Advance pushups to table height then floor pushups ○ Week 20- Overhead athletes- interval throwing program once strength & ROM goals of this phase achieved ○ Plyometrics- bilateral arm throwing patterns beginning with chest pass, progress to single arm. Overhead b/l medicine ball slams & catches. Rebounder IR/ER at 90 abduction, supine IR/ER ball catch & toss. Progress all to single arm. ○ Week 20- Limited sport specific overhead work for swimming, tennis, volleyball
CARDIOVASCULAR EXERCISE	○ Continue to progress from phase 4. Initiate jog/run progression.
PROGRESSION CRITERIA	○ At least 85% strength of contralateral (at least 70% rotator cuff ratio) ○ No pain or limitation with initiation of throwing (overhead athletes) or other overhead program ○ No instability

PHASE 6- 25+ weeks

REHAB GOALS	Return to sport
PRECAUTIONS	Post-activity soreness should resolve within 24 hours
RANGE OF MOTION EXERCISES	Continue with flexibility exercises
SUGGESTED THERAPEUTIC EXERCISES	○ Progress strengthening from phase 5 ○ Progress pushups to dynamic b/l UE wall pushups & then s ingle arm dynamic pushups on wall. Progress to dynamic floor pushups, can incorporate unstable surfaces, etc ○ Ok to progress to pressing exercises with hands shoulder width ○ Overhead athletes- Interval throwing program- Phase 2 ○ Sport specific- Wrestling: ok to progress to quadruped & partner drills. Football: lineman ok for bag work & one on one drills
CARDIOVASCULAR EXERCISE	○ Progress to baseline
PROGRESSION CRITERIA- RETURN TO SPORT	○ Pain free, full ROM, uncompensated under fast & resisted conditions ○ 90% strength of contralateral side rotator cuff & scapular (at least 70% rotator cuff ratio). ○ Completion of throwing program/sport specific program ○ At least 90% functional closed kinetic chain tests ○ Overhead athletes with normal mechanics/form and no pain post activity ○ Return to sport likely 8-9 months for overhead athletes