



Orthopedic Surgery, Sports Medicine & Arthroscopy Specialists

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REHABILITATION PROTOCOL- SLAP 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

PHASE 1- Surgery to 2 weeks

REHAB GOALS	<ol style="list-style-type: none"> 1. Protection of the post-surgical repair 2. Emphasize importance of sling usage 3. Minimize swelling & pain
PRECAUTIONS	<ol style="list-style-type: none"> 1. Sling immobilization for 6 weeks, use at all times except bathing & ROM exercises 2. ROM precautions: External rotation <15 deg in scapular plane, humeral elevation 60-75 deg in scapular plane 3. Avoid active biceps contraction, elbow flexion & resisted supination 4. No active elevation, extension or abduction for 4 weeks 5. Cryocuff 3-5 times per day for 20 minutes and ice after every therapy session once splint removed 6. No lifting or carrying objects
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> ○ Active & passive wrist, hand ROM, ball squeeze, gripping ○ Supported Codman exercises
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> ○ As above ○ Postural scapular squeezes ○ Soft tissue techniques to cervical musculature, torso, parascapular & shoulder girdle

	<ul style="list-style-type: none"> ○ Week 2- LE and core strengthening with sling on at all times
CARDIOVASCULAR EXERCISE	None
PROGRESSION CRITERIA	<ul style="list-style-type: none"> ○ Minimal/no pain ○ 100% sling compliance ○ No signs of repair failure ○ Wound healing

PHASE 2- 3-6weeks

REHAB GOALS	<ol style="list-style-type: none"> 1. Protection of the post-surgical repair 2. Prevent contracture of hand/wrist/elbow 3. Minimize pain and swelling
PRECAUTIONS	<ol style="list-style-type: none"> 1. Sling immobilization for 6 weeks, use at all times except bathing & ROM exercises 2. External rotation <30 deg in scapular plane, humeral elevation 90 deg in scapular plane, abduction 80 degrees, extension 0 for first 4 weeks, then progress to ER 60, elevation 145, abduction 90, extension 20 for weeks 4-6 3. Avoid active biceps contraction, elbow flexion & resisted supination 4. No active elevation, extension or abduction for 4 weeks 5. Cryocuff 3-5 times per day for 20 minutes and ice after every therapy session once splint removed 6. No lifting or carrying objects
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> ○ Continue phase 1 exercises ○ ROM restrictions: as above ○ After week 4-active elbow flexion, IR in scapular plane to 45 deg, gentle behind back IR stretching with towel ○ Glenohumeral/scapular mobilizations as needed
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> ○ Continue phase 1 exercises ○ Closed chain UE table slides progressing to flexed trunk, ball walks, wall slides within ROM precautions ○ 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 ○ 4 weeks-rotator cuff IR/ER isometrics within pain tolerance, open chain rhythmic stabilization within pain tolerance & ROM guidelines ○ 4 weeks- submaximal isometrics for shoulder (abd, flex, ex) & scapular (shrugs, retraction) ○ Scapular clocks

CARDIOVASCULAR EXERCISE	Stationary bike at week 3 while wearing sling at all times
PROGRESSION CRITERIA	<ul style="list-style-type: none"> ○ No swelling or pain ○ Elbow, wrist & hand ROM equal to contralateral ○ Active ROM without scapular compensations to 150 elevation, ER 50, IR behind back to L5 ○ PROM per ROM guidelines

PHASE 3- 7-10 weeks postop

REHAB GOALS	<ul style="list-style-type: none"> ○ Protect surgical repair ○ Gradual restoration of ROM ○ Improve scapular, cuff strength ○ Normalize trunk & kinetic chain
PRECAUTIONS	<ul style="list-style-type: none"> ○ ROM limitations- ER side 90, IR 75 in abduction ○ No resistance isolated to biceps for strengthening
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> ○ Continue exercises from phase 2. ○ Mobilizations as needed ○ ROM limitations as above, progress to full scaption, abduction, flexion ○ Pec stretches, sleeper stretches
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> ○ Continue exercises from phase 2 ○ LE & core- progress strengthening ○ Rotator cuff & scapular prone exercises to light isotonic and/or elastic resistance as ROM normalized w/o scapular substitution ○ Resisted IR/ER neutral, Side lying ER & forward punches ○ Shoulder retractions, standing “W’s”, prone horizontal abduction “T’s”, rowing, extension ○ Rhythmic stabilization & manual strengthening of UE w/short moment arms/proximal resistance ○ Bodyblade 0 deg abduction & 90 scapular elevation ○ Closed chain PNF in quadruped ○ Sport specific: ok to initiate sport specific drills with arm at side (fielding, glove work, LE footwork)
CARDIOVASCULAR EXERCISE	Stationary bike increasing resistance, advance to elliptical, treadmill walking, stairmaster
PROGRESSION CRITERIA	<ul style="list-style-type: none"> ○ Full pain free active elevation, abduction & IR/ER at 90 abduction ○ No pain or swelling

PHASE 4- 11-14 weeks postop

REHAB GOALS	<ul style="list-style-type: none"> ○ Full ROM in all planes ○ 80% strength of contralateral ○ Improvement of strength, endurance, neuromuscular control
PRECAUTIONS	<p>Post-activity soreness should resolve within 24 hours</p> <p>Avoid post activity swelling</p>
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> ○ Continue with flexibility exercises from previous phase ○ LE and core flexibility ○ Posterior shoulder stretching- horizontal adduction, sleepers
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> ○ 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 ○ Subscap strengthening- supine dumbbell flys, theraband standing ○ Prone Y’s ○ Ok to begin biceps strengthening after week 12 ○ Plyometrics- light w/side lying & prone ball drops below 45 deg elevation. Two arm rebounder shoulder IR/ER with arms at side, chest passes w/ROM below 45 deg elevation, wall dribbles light resistance overhead
CARDIOVASCULAR EXERCISE	<p>Continue from phase 3, add upper body ergometer if needed. Jogging at week 12</p>
PROGRESSION CRITERIA	<ul style="list-style-type: none"> ○ Normal kinematics of GH & ST joints ○ Strength 80% contralateral

PHASE 5- 15-24 weeks

REHAB GOALS	<ul style="list-style-type: none"> ○ Continue strengthening ○ Full pain free ROM ○ Good core & LE strength & stability ○ 85% strength of contralateral
PRECAUTIONS	<ul style="list-style-type: none"> ○ Post-activity soreness should resolve within 24 hours ○ Caution with progression if inadequate core stability/scapulothoracic control/rotator cuff strength present
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> ○ Continue with flexibility exercises

SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> ○ Progress strengthening from phase 4 ○ Week 20- Overhead athletes- interval throwing program once strength & ROM goals of this phase achieved ○ Progress to rhythmic stabilization & strengthening of UE to long moment arms & distal resistance. Bodyblade in ABER position, core stability on unstable surfaces ○ PNF D1-2 w/manual resistance, fast reversals, terminal holds w/perturbations ○ Closed chain PNF in plank & long arc positions progressing to unstable surfaces ○ Plyometrics- progress to unilateral & overhead positions, supine IR/ER ball catch & toss, heavy full kinetic chain plyometrics (ball slams, medicine ball overhead, sidebody throws), one arm rebounder shoulder IR/ER in abduction
CARDIOVASCULAR EXERCISE	<ul style="list-style-type: none"> ○ Continue to progress from phase 4. Initiate walk/run progression. Swimming at week 16
PROGRESSION CRITERIA	<ul style="list-style-type: none"> ○ At least 85% strength of contralateral ○ No pain or limitation with initiation of throwing (overhead athletes) or other overhead program

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	<ul style="list-style-type: none"> ○ Progress strengthening from phase 5 ○ Overhead athletes- Interval throwing program- Phase 2
CARDIOVASCULAR EXERCISE	<ul style="list-style-type: none"> ○ Progress to baseline
PROGRESSION CRITERIA- RETURN TO SPORT	<ul style="list-style-type: none"> ○ Pain free, full ROM, uncompensated under fast & resisted conditions ○ 90% strength of contralateral side rotator cuff & scapular. ○ Completion of throwing program/sport specific program ○ At least 90% functional closed kinetic chain tests

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| | <ul style="list-style-type: none">○ Overhead athletes with normal mechanics/form and no pain post activity○ Return to sport likely 8-9 months for overhead athletes |
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