# Jonathan Watson, MD

## REHABILITATION PROTOCOL- Shoulder anterior + 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

_____

_____

## PHASE 1- Surgery to 2 weeks

| | |
|---|---|
| REHAB GOALS | 1. Protection of the post-surgical repair<br>2. Emphasize importance of sling usage<br>3. Minimize swelling & pain |
| PRECAUTIONS | 1. Sling immobilization for 6 weeks, use at all times except bathing & ROM exercises<br>2. ROM precautions: Passive forward elevation 90 scapular plane, ER to neutral with <20 deg abduction, adduction 0, abduction 90. Avoid abduction & external rotation. Avoid scapular protraction for 6 weeks.<br>3. Cryocuff 3-5 times per day for 20 minutes and ice after every therapy session once splint removed<br>4. No lifting or carrying objects |
| RANGE OF MOTION EXERCISES | ○ Active & passive wrist, hand ROM, ball squeeze, gripping<br>○ Supported Codman exercises<br>○ No stretching at this time |
| SUGGESTED THERAPEUTIC EXERCISES | ○ As above<br>○ Week 2- LE and core strengthening with sling on at all times |

| | |
|---|---|
| CARDIOVASCULAR EXERCISE | None |
| PROGRESSION CRITERIA | ○ Minimal/no pain<br>○ 100% sling compliance<br>○ No signs of repair failure<br>○ Wound healing |

## PHASE 2- 3-6weeks

| | |
|---|---|
| REHAB GOALS | 1. Protection of the post-surgical repair<br>2. Prevent contracture of hand/wrist/elbow<br>3. Minimize pain and swelling |
| PRECAUTIONS | 1. Sling immobilization for 6 weeks, use at all times except bathing & ROM exercises<br>2. ROM precautions: Weeks 3 & 4: IR 0, Passive forward elevation 90 scapular plane, ER to 20 with <20 deg abduction, adduction 0, abduction 100. Weeks 5&6: IR 0, passive forward elevation 90 scapular plane, adduction 0, abduction 120. Avoid abduction, external rotation.<br>3. No scapular protraction, horizontal adduction or IR for 6 weeks<br>4. Cryocuff 3-5 times per day for 20 minutes and ice after every therapy session once splint removed<br>5. No lifting or carrying objects. Avoid posterior shoulder/capsular stress |
| RANGE OF MOTION EXERCISES | ○ Continue phase 1 exercises- no active ROM<br>○ ROM restrictions: as above<br>○ Glenohumeral/scapular mobilizations as needed in 30 deg scapular elevation, neutral rotation<br>○ Active assist ROM w/pulleys- can begin after week 4 as long as correct technique demonstrated. Can include flexion & ER at side via wands & wall walks with cues to avoid compensatory shoulder shrugs. |
| SUGGESTED THERAPEUTIC EXERCISES | ○ Continue phase 1 exercises<br>○ Submaximal isometrics in neutral rotation & <30 abduction w/ elbow flexed to 90 for flexion, abduction, ER, extension<br>○ Closed chain exercises below 90 elevation, begin in modified wt bearing position, progress to full weight bearing by week 6<br>○ T bar/cane exercises supine for active assist ROM within precautions<br>○ Core & hip isometrics<br>○ Higher level athletes may begin single LE balance with head movements, functional 1/3 squats, step ups/downs and stationary lunges<br>○ Scapular retraction & PNF patterns (minimal/no resistance)<br>○ Angular repositioning, rhythmic stabilization, repeated |

| | |
|---|---|
| | contractions within ROM restrictions |
| CARDIOVASCULAR EXERCISE | Stationary bike at week 3 while wearing sling at all times |
| PROGRESSION CRITERIA | ○ No swelling or pain. No signs/symptoms of instability<br>○ Elbow, wrist & hand ROM equal to contralateral<br>○ PROM per ROM guidelines |

## PHASE 3- 7-12 weeks postop

| | |
|---|---|
| REHAB GOALS | ○ Protect surgical repair<br>○ Gradual restoration of ROM<br>○ Improve scapular, cuff strength<br>○ Normalize trunk & kinetic chain |
| PRECAUTIONS | ○ ROM limitations- Weeks 7 & 8: ER at 90 abduction 45 degrees, active forward elevation 115, ER at side <50, IR 70, adduction 20, abduction 160. Weeks 9-11: ER at 90 abduction 75, active forward elevation 145, ER at side <65, IR 70, adduction 20, abduction 160. Week 12 no ROM limitations<br>○ Discontinue sling use<br>○ Recommend full active forward elevation before progressing to elevation in other planes or resistive elevation<br>○ Avoid forced horizontal adduction & axial loading with arm past neutral adduction. Avoid abduction & external rotation past guidelines |
| RANGE OF MOTION EXERCISES | ○ Continue exercises from phase 2.<br>○ Mobilizations as needed (esp ant/inf glides)<br>○ ROM limitations as above<br>○ Progress forward elevation from active assist to active, then resistive upright then prone<br>○ Continue passive ROM in scapular plane. Flexion & IR/ER at 45 of abduction introduced as pain tolerates<br>○ 12 weeks- Posterior shoulder stretching- horizontal adduction, sleepers, lat & pec stretches |
| SUGGESTED THERAPEUTIC EXERCISES | ○ Continue exercises from phase 2<br>○ LE & core- progress strengthening. No power clean/dead lift/back squats. Front squats ok<br>○ Light Elbow flexion/extension strengthening<br>○ Begin rotator cuff strengthening. Start <45 elevation in plane of scapula. Progress to higher levels of elevation as tolerated. Side lying ER, standing IR/ER with light resistance tubing ( do not exceed 30 of abduction/IR)<br>○ Scapular PNF- supine, progress to side lying, seated, standing<br>○ Wt bearing exercise w/fixed distal segment- quadruped, quadruped w/scapular protraction, quadruped to tripod. (no |

| | |
|---|---|
| | pushups)<br>○ Rhythmic stabilization at 45 abduction in scapular plane neutral rotation. Gradually increase elevation & ER.<br>○ Progress manual strengthening to serratus, cuff, scapular (supine, side lying D1 & D2, slow reversals)<br>○ 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<br>○ 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. Wall pushups<br>○ Week 8- body blade at 0 abduction & 90 scapular elevation.<br>○ Week 9-Also can add light weights to scapular elevation & flexion (open can)<br>○ Week 10- Seated press ups for lats. Functional exercises ok with arms out front. |
| CARDIOVASCULAR EXERCISE | Stationary bike increasing resistance, treadmill walking<br>Week 9-stairmaster, advance to elliptical (no upper body)<br>UBE as tolerated, aqua therapy as needed |
| PROGRESSION CRITERIA | ○ Achievement of ROM goals<br>○ No pain/swelling/instability<br>○ Normal glenohumeral & scapulothoracic mechanics |

## PHASE 4- 13-24 weeks postop

| | |
|---|---|
| REHAB GOALS | ○ Full ROM in all planes<br>○ 85% strength of contralateral<br>○ Improvement of strength, endurance, neuromuscular control |
| PRECAUTIONS | ○ Post-activity soreness should resolve within 24 hours<br>○ Avoid post activity swelling<br>○ Avoid forced horizontal adduction & axial loading with arm past neutral adduction<br>○ 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<br>○ Gentle end range stretching<br>○ LE and core flexibility<br>○ Mobilizations as needed |
| SUGGESTED THERAPEUTIC | ○ Continue phase 3 activities. Progress with resistance/load. Add eccentric loads, beginning with ER & abduction, then progress to IR & abduction. |

| | |
|---|---|
| EXERCISES | ○ Open chain- upright rows, seated rows, lateral & front raises, throwers exercises, tubing fencing, step & punch, plate push, pool resisted motions<br>○ Closed chain- side planks, front planks, weight shifts, figure 8s on slide board in quadruped/standing. Advance pushups to table height then floor pushups<br>○ 16 weeks: thrower's exercises: ER/IR at 0 abduction (progress to IR/ER at 20 weeks), 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<br>○ Balance/proprioception- progress to unstable surface, perturbations, etc<br>○ Week 20- Plyometrics- LE drills, UE wall dribble, plyoback/rebounder (chest pass, ER/IR ball toss & catch) Begin with unweighted balls<br>○ Sport specific- LE drills in controlled environment at week 13. Week 20-med ball throws against wall, UE fitter/stepper in prone position, dribbling on wall/rebounding with one hand. Non-contact and non-overhead athletes begin sports specific drills at week 20. |
| CARDIOVASCULAR EXERCISE | Continue from phase 3, add upper body ergometer if needed. Walk/jog progression at week 13 |
| PROGRESSION CRITERIA | ○ Normal kinematics of GH & ST joints<br>○ Full painless active & passive ROM<br>○ Strength 85% contralateral |

## PHASE 5- 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 4<br>○ 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.<br>○ 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<br>○ Ok to progress to pressing exercises with hands shoulder width<br>○ Ok to begin sport specific overhead work for swimming, tennis, volleyball<br>○ Overhead athletes- Interval throwing program- Phase 1, progress to phase 2 when completed<br>○ Wrestling: ok to progress to quadruped & partner drills. Football: lineman ok for bag work & one on one drills |
| CARDIOVASCULAR EXERCISE | ○ Jog/run progression. Begin sprinting when able to run 2 miles without pain. |
| PROGRESSION CRITERIA- RETURN TO SPORT | ○ Pain free, full ROM, uncompensated under fast & resisted conditions<br>○ 90% strength of contralateral side rotator cuff & scapular (at least 70% rotator cuff ratio).<br>○ Completion of throwing program/sport specific program<br>○ At least 90% functional closed kinetic chain tests<br>○ Overhead athletes with normal mechanics/form and no pain post activity<br>○ Return to sport likely 8-9 months for overhead athletes |