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## *Bankart (Anterior Stabilization) Repair Rehabilitation Guidelines*

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This rehabilitation protocol has been developed for the patient following arthroscopic shoulder stabilization surgery (Bankart-type repair). This protocol will vary in length and aggressiveness depending on factors such as:

- Quality of the repaired tissue
- Presence of additional procedures
- Degree of shoulder instability or generalized laxity prior to surgery
- Acute versus chronic condition
- Length of time immobilized
- Strength/pain/swelling/range of motion status
- Rehabilitation goals and expectations

The therapist should communicate with the physician regarding the above factors to determine proper progression of rehab.

Early passive range of motion is highly beneficial to enhance circulation within the joint to promote healing. The protocol is divided into phases. Each phase is adaptable based on the individual and special circumstances. The **overall goals** of the surgical procedure and rehabilitation are to:

- Control pain, inflammation, and swelling
- Regain normal/full upper extremity strength and endurance
- Regain normal/full shoulder range of motion
- Achieve the desired level of function based on the orthopedic and patient goals

Physical therapy should be initiated after the first week post-op. The supervised rehabilitation program is to be supplemented by a home fitness program where the patient performs the given exercises at home or at a gym facility. **Important post-op signs** to monitor:

- Swelling of the arm or shoulder and surrounding soft tissue

- Abnormal pain response, hypersensitivity, increasing night pain
- Severe range of motion limitations
- Weakness in the upper extremity musculature
- Improper mechanics or scapular dyskinesia
- Core and peri-scapular strength deficits

### **Return to activity:**

Return to activity requires both time and clinical evaluation. To safely and most efficiently return to normal or high level functional activity, the patient requires adequate strength, flexibility, and endurance. Functional evaluation including strength and range of motion testing is one method of evaluating a patient's readiness to return to activity. Return to intense activities following shoulder stabilization requires both a period of time to allow for tissue healing along with a graduated strengthening and range of motion program. Symptoms such as pain or swelling should be closely monitored by the patient and therapist. Specific exercises may be added, substituted, or modified where clinically appropriate by experienced sports/shoulder therapists or trainers who have expertise in the care of post-operative tendon repair procedures. While patients may be "cleared" to resume full activities at 6+ months following surgery, additional time spent in full activity or sport participation is often necessary to achieve maximal recovery.

### **Suggestions during rehab:**

1. These patients are often not in a lot of pain post-operatively and are able to passively move in wide ranges of motion, if allowed. ROM precautions should be strictly adhered to and the patient must be educated in avoiding overstretching so that the repair can heal, even if motion is pain free. Often, the patient will start to tighten and the therapist will feel a change in the end feel during passive range. It is at this point that you may want to start initiating ROM exercises, continuing to adhere to precautions but working to obtain full range by 8-10 weeks postoperatively.
2. The RC gets a better blood supply when the shoulder is slightly away from the body; therefore, advocate the use of a towel roll under the arm when in a resting position.
3. The RC muscles are very small; therefore, we use lower intensities to isolate each muscle without recruitment from surrounding larger muscles. Focus on hypertrophy initially by high volume ( $V = \text{Reps} \times \text{intensity/weight}$ ). Following the hypertrophy phase, strength is the focus with lower reps and higher intensities/weight.
4. Closed chain rotator cuff exercises facilitate cuff strength and shoulder proprioception. Like closed chain exercises for the knee, these can be safely initiated early in the post-op course.

<p>PHASE 1: Post-op - Week 3</p>	<p><b><i>Focus of this phase is protection, decrease symptoms, initiate passive ROM</i></b></p> <p><b>BRACE/SLING</b></p> <ul style="list-style-type: none"> <li>• To be worn for 4 weeks even while sleeping</li> <li>• Can be removed for exercises only</li> </ul> <p><b>ROM</b></p> <ul style="list-style-type: none"> <li>• <b>NO ACTIVE ROM</b>, passive and active assisted only</li> <li>• Active-assisted flexion/scaption: goal is 90° by week 3</li> <li>• ER in neutral and scapular plane: goal is 20° by week 3</li> <li>• IR in scapular planes: as tolerated</li> <li>• Exercises <ul style="list-style-type: none"> <li>○ Pendulums small circles (whenever aching)</li> <li>○ Supine active assisted flexion using other UE 10x10"</li> <li>○ Cane/wand for ER in neutral and scaption supine 10x10"</li> <li>○ Cross body post cuff stretch seated or supine 10x10"</li> <li>○ Active ROM elbow/wrist/digits</li> </ul> </li> </ul> <p><b>STRENGTH</b></p> <ul style="list-style-type: none"> <li>• Seated/supine scapular retractions 10x10" every hour (can do in sling)</li> <li>• Pain-free submax isometrics with towel under arm and scapula retracted: fl/ext/ER/IR</li> </ul> <p><b>MANUAL</b></p> <ul style="list-style-type: none"> <li>• Grade I, II GH joint mobilization</li> <li>• PROM all planes except extension adhering to limitations</li> </ul> <p><b>MODALITIES</b></p> <ul style="list-style-type: none"> <li>• Moist heat 10-15 min prior to exercise</li> <li>• Ice 10-15 min following exercise and as needed</li> <li>• E-stim/TENS for pain as needed</li> </ul> <p><b>GOALS OF PHASE 1</b></p> <ul style="list-style-type: none"> <li>• Promote healing of repaired tissue</li> <li>• Control pain and inflammation</li> <li>• Gradual increase of ROM</li> <li>• Independent in HEP</li> <li>• Delay muscle atrophy</li> </ul>
<p>PHASE 2: Weeks 3-6</p>	<p><b><i>Focus of this phase is gradual increase in ROM and strength</i></b></p> <p><b>ROM</b></p> <ul style="list-style-type: none"> <li>• Flexion/Elevation: goal is 140° by end of week 4, 160° by end of week 6</li> <li>• ER in neutral and scapular plane: goal is 30° by week 4, 45° by week 6</li> </ul>

- ER at 90/90: goal is 15° by week 6
- IR in scapular plane: full motion by week 6
- Exercises
  - Continue with AA fl using other UE or cane
  - Initiate pulley for flexion and scaption
  - ER with cane at neutral, scaption and 90°/90°
  - Towel behind back IR stretch if needed
  - Posterior capsule stretch
  - Initiate UBE without resistance at week 4

## STRENGTH

- Initiate TheraBand IR/ER with towel under arm and scapula retracted
- Prone row and scapular retraction with elbow flexed
- Prone with arm hanging off table, shoulder extension to neutral with elbow extended and thumb out (arm externally rotated) – have patient simultaneously retract scapula
- Rhythmic stabilization: initiate supine, progress as able to side-lying, partial sitting then standing
- Supine serratus punches, add weight as able
- Standing shrugs
- Standing rows with TheraBand/machine/sports cord focus on scapular retraction
- Standing shoulder flexion and scaption with good scapulo-humeral rhythm (no shoulder hike indicating upper trap activation). If can't do standing initiate supine with emphasis on shoulder depression as lift arm. Begin with weight of arm and then add dumbbells as able.
- Side-lying ER with towel under arm and scapula retracted
- Body blade IR/ER in neutral with elbow flexed to 90° supine progress to standing
- Side-stepping holding TB at neutral for ER/IR
- Wall push-ups with plus

## MANUAL

- PROM all planes maintaining post glide on humerus during IR and stabilizing scapula during post cuff cross body stretch
- Grade II, III GH jt mobs as needed

## MODALITIES

- Heat prior to exercises
- Ice following exercises and at end of day
- Ultrasound to portals or soft tissue if needed

	<p><b>GOALS OF PHASE 2</b></p> <ul style="list-style-type: none"> <li>• Control pain and inflammation</li> <li>• Gradually restore ROM</li> <li>• Initiate active muscle contractions</li> <li>• Regain proper scapulo-humeral rhythm</li> <li>• Initiate joint proprioception training</li> <li>• Continue home exercise program</li> </ul>
<p><b>PHASE 3: WEEK 6-12</b></p>	<p><i>Focus of this phase is full active ROM and RC/Scapular strengthening</i></p> <p><b>ROM</b></p> <ul style="list-style-type: none"> <li>• Full active range in all planes by week 8-10</li> <li>• Exercises <ul style="list-style-type: none"> <li>○ Continue previous as needed</li> <li>○ Chicken wing stretch for ER/IR</li> <li>○ Side-lying horizontal adduction if lacking Hz add</li> <li>○ Sleeper stretch for IR side-lying if lacking IR</li> <li>○ Low load long duration overhead stretches if lacking elevation</li> </ul> </li> </ul> <p><b>STRENGTH</b></p> <ul style="list-style-type: none"> <li>• UBE with resistance forward and backward</li> <li>• Progress standing db exercises</li> <li>• Prone scaption, horizontal abduction, extension, ER</li> <li>• Push up progression: wall, off edge of table, kneeling, regular push up</li> <li>• Standing extension with TB or sports cord</li> <li>• Roll-outs to push-up position with body over swiss ball gradually moving out further and further</li> <li>• Kneeling with forearms on swiss ball roll-outs to plank position on knees</li> <li>• TB ER at neutral and 90°/90° position</li> <li>• D2 patterns with body blade, thera-band, cable column</li> <li>• Progress all exercises to perform on unstable surface for core</li> <li>• Week 8-10+: 2 handed plyos: chest pass, OH toss, diagonals</li> <li>• Week 10+: Isokinetics IR/ER in neutral</li> </ul> <p><b>MANUAL</b></p> <ul style="list-style-type: none"> <li>• GH joint mobs and PROM all planes as needed</li> <li>• Manual resistance all motions: ER supine/side-lying, diagonals, rhythmic stab</li> </ul> <p><b>MODALITIES</b></p> <ul style="list-style-type: none"> <li>• Heat if needed prior to exercise</li> <li>• Ice after exercise</li> </ul>

	<p><b>GOALS OF PHASE 3</b></p> <ul style="list-style-type: none"> <li>• Full AROM all planes</li> <li>• Improve strength to allow initiation of functional activities</li> <li>• Normalize kinematics</li> </ul>
<p><b>PHASE 4: WEEK 12- 24+</b></p>	<p><i>Focus of this phase is return to sport/full activity</i></p> <p><b>ROM</b></p> <ul style="list-style-type: none"> <li>• Continue with all ROM activities from previous phases</li> <li>• Posterior capsule stretching</li> <li>• Towel stretching</li> <li>• Grade III-IV joint mobs as needed for full ROM</li> <li>• For high school athletes, at 12 weeks passive ER should be 100-105, allow athlete to gain rest on his/her own</li> <li>• For college/pro athletes, active ER should be 100-105 and passive 110-115, allow rest to come on its own</li> </ul> <p><b>STRENGTH</b></p> <ul style="list-style-type: none"> <li>• Progress strengthening program with increase in resistance and high speed repetition</li> <li>• UBE high resistance for endurance</li> <li>• IR/ER exercises at 90° abduction</li> <li>• Progress rhythmic stabilization activities to include standing PNF patterns with tubing</li> <li>• Initiate single arm plyotoss (ball toss, ball on wall)</li> <li>• Eccentric RC strengthening</li> <li>• Initiate military press, bench press, flys, lat pulldowns week 16+ (do NOT let elbow extend past plane of thorax)</li> <li>• Initiate sport specific drills and functional activities</li> <li>• Initiate interval throwing program week 16-20 – consult with Dr. Johnson first*</li> <li>• Initiate light upper body plyometric program week 16-20</li> <li>• Progress isokinetics to 90° abduction at high speeds</li> </ul> <p><b>MODALITIES</b></p> <ul style="list-style-type: none"> <li>• Ice following exercise/activity</li> </ul> <p><b>GOALS OF PHASE 4</b></p> <ul style="list-style-type: none"> <li>• Full painless ROM</li> <li>• Maximize upper extremity strength and endurance</li> <li>• Maximize neuromuscular control</li> <li>• Optimize shoulder mechanics/kinematics</li> <li>• Optimize core stability</li> <li>• Implement sports specific training/functional training</li> </ul>