



Superior Labrum Anterior Posterior (SLAP) Repair (Type II) Return to Sport Protocol

General Rehabilitation Guidelines:

- A specific Rehabilitation program is dependent on the severity of the pathology/injury and should specifically manage the healing and requirement of the procedure the patient underwent (Debridement vs. Repair), in addition to other concomitant injuries/procedures performed
- The emphasis of the SLAP protocol should be on restoration and enhancement of the dynamic stability of the glenohumeral and scapulo-thoracic joints while protecting the healing tissues from adverse stress
- Hypersensitivity in axillary nerve distribution is a common occurrence
- For patients who sustained a SLAP lesion secondary to a fall/compression (MVA, Fall on out-stretched arm), weight-bearing exercises should be avoided to minimize compression and shear on the superior labrum
- Patients who sustained a traction-type injury should avoid heavy resistance or excessive eccentric biceps contractions
- Patients with peel-back lesions (typically overhead athletes), should avoid excessive amounts of shoulder ER while the SLAP lesion is healing
- **SLAP Classifications:** (basic 4, recently additional classifications added):
 - **Type I:** Isolated Fraying of the superior labrum, with a firm attachment of the superior labrum to the glenoid (typically degenerative in nature).
 - **Type II:** (Most common, especially with overhead athletes): A detachment of the superior labrum and the origin of the long head of the biceps brachii tendon from the glenoid creating instability of the biceps-labral anchor.
 - **Type III:** A bucket-handle tear of the superior labrum with an intact biceps insertion.
 - **Type IV:** (The least common of the 4 main types): A bucket-handle tear of the superior labrum that extends into the biceps tendon. This type will also have instability at the bicep-labrum anchor.
 - **Type V:** SLAP lesions with the presence of a Bankart lesion of the anterior capsule extending into the anterior superior labrum.
 - **Type VI:** A disruption or separation of the biceps anchor with an anterior posterior superior labral unstable flap tear.
 - **Type VII:** Lesions that extended anteriorly to involve the area inferior to the middle glenoid ligament.
 - **Type VIII:** A type II SLAP tear with a posterior labral extension to the 6 o'clock position.
 - **Type IX:** Is a circumferential lesion involving the full 360° of labral attachment to the glenoid rim.
 - **Type X:** Involves a superior labral tear combined with a posteroinferior labral tear (a reverse Bankart lesion).
 - * It is common to have concomitant injuries with SLAP lesions, so these classifications can be beneficial for creating the most appropriate treatment plan*

Type II SLAP Repair: (Repair):

- Common in overhead athletes, and typically peel-back lesions
- Rehabilitation progression rate typically slower for 3- than 1- anchor repair

Phase I: Protective phase: (approximately 6 weeks)

Goals:

- Protect the structures that were surgically repaired
- Decrease/ eliminate pain and inflammation
- Ensure there are little to no negative effects from prolonged immobilization
- Activation of the stabilizing muscles of glenohumeral & scapulo-thoracic joints

Patient Education:

- Sling worn to sleep & all day for 4 weeks post-op- removal only at rest or HEP
- No Resisted Biceps activity (both Elbow Flexion & Supination), or UE Weight-Bearing for 8 Weeks Post-Op to protect healing anchor
- No AROM is allowed for the first 4 weeks (only gentle PROM and AAROM) within allowable motion ranges

Weeks 0-2 Post-Op:

- Treatment:
 - **Modalities:** PRN
 - Assess any breathing dysfunctions and teach appropriate breathing exercises for diaphragmatic breathing
 - AROM of wrist and hand, Hand gripping exercises
 - PROM of elbow flexion and extension (**No isolated biceps contraction**)
 - PROM and gentle shoulder AAROM exercises:
 - Flexion: **week 1:** 0°-60°, **week 2:** 0°-75°
 - Elevation in the scapular plane to 60°
 - IR: to 45°, ER: 10-15°, (both in the scapular plane)
 - Submaximal isometrics for shoulder (in neutral or scapular plane) for shoulder flexion, abduction, extension, IR & ER, and scapular musculature

Weeks 3-4 Post-Op:

- Treatment:
 - **Modalities:** Continue any needed PRN
 - Continue gentle PROM and AAROM exercises from the first 2 weeks post-op, progressing: Rate of Progression based on patient evaluation
 - Flexion to 90°, Abduction to 75°-80°
 - IR: 55°-60°, ER: 25°-30°, (both still in scapular plane)
 - No Active ER, Elevation, or Extension of injured UE
 - Continue Isometrics, Add Light Resistance Tubing for IR & ER at 0°
 - Initiate Neuromuscular Re-Ed (Rhythmic Stabilization and Proprioception training drills)

Weeks 5-6 Post-Op:

- Treatment:
 - **Modalities:** PRN
 - Continue to improve ROM- PROM, AAROM, AROM:
 - Flexion to 145°
 - ER: 45°- 50°, IR: 55°-60°, (both at 45° of abduction)
 - May initiate light PROM at 90° of abduction for IR and ER
 - Light isotonic strengthening for shoulder and scapulothoracic musculature, (with the exception of the biceps), with resistance tubing and dumbbells
 - ER/IR tubing/dumbbell at 0° abduction: side-lying ER, Prone Rowing, Prone Horizontal Abduction, Prone ER
 - Cont. PNF Manual Resistance: Initiate Diagonals, rhythmic stab.
 - Active Elevation Exercises into abduction (Lateral raises) and scapular plane (full can) exercise- **no resistance** (weight of the arm)- AROM, wall slides, wall ladder
 - UE Ranger can also be utilized in sidelying and standing
 - **No biceps strengthening and Weight-Bearing restrictions continued**

Criteria for Entering Phase II

- Patient met all ROM goals from current phase
- Able to perform current exercise program with minimal to no pain
- Patient is able to demonstrate improving scapular strengthening with maintenance of posture and balance while performing current exercises

Phase II- Intermediate Phase: (approximately weeks 7-12)

Goals:

- Gradually restore full ROM by approximately week 10 Post-OP
- Restore motor control and motor planning for muscular strength and symmetry
- Restore Normal Arthrokinematics- Cervical, Thoracic, and Shoulder
- Restore full Rotator Cuff strength in a neutral position

Patient Education:

- Patient is free to use arm for normal daily activities for dressing bathing and self care, however, they should not raise arm overhead while carrying anything greater than 1 pound.
- Cardiovascular Fitness: Walking, Stationary Bike, Elliptical, without sling
 - No Swimming or treadmill running
- Forceful pushing and pulling could also still disrupt healing of the surgical repair.

Weeks 7-9 Post-Op:

- Treatment:
 - **Modalities:** Continue or use any modalities PRN
 - Progress ROM:
 - Flexion to full motion
 - ER: 90°-100°, IR: 70°-75°, (both at 90° of abduction)
 - Continue Isotonic strengthening: Resistance band exercises progressed IR/ER at 30° abduction (towel roll), Forward Punch, Dynamic Hug, W's
 - **No Weight Bearing until week 8 post-op**
 - Initiate the Throwers Ten Program, **by Weeks 7-8 Post-Op**

Weeks 10-12 Post-Op:

- Treatment:
 - Increase ER towards the throwers motion
 - ER (at 90° of abduction): 115°-120°
 - Continue to progress all isotonic and NM strengthening exercises
 - Manual Resistance and Rhythmic Stabilization can be performed at end-range of motion
 - Prone I's, T's, Y's, L's, & W's
 - If capsular tightness is present continue to use manual techniques as well as stretches, (Cross-Body Stretch for posterior capsule tightness), to return patient to throwers ROM
 - Once ROM is achieved, may begin UE Plyometric Protocol Phase I

Criteria to Progress to Phase III:

- Full non-painful ROM
- Muscle strength to 4/5 or better
- No pain or tenderness in the shoulder
- Able to perform current exercises program with minimal to no pain or dysfunction

Phase III- Advanced Strengthening Phase: (approximately weeks 12-20)

Goals:

- Maintain full Active and Passive ROM.
- Continue to improve/regain muscle strength, stability, and begin to train power and endurance.
- Improve neuromuscular control of the Shoulder, Scapula, Trunk, and Hips
- Assess Core Stability and Dysfunction- determine whether dysfunctions are true strength issues or if they are a result of muscular inhibition from a joint/movement restriction.

Patient Education:

- Avoid all activities that pose a high risk of falling, or that require an outside force is applied to the surgically repaired arm
 - No throwing or overhead sports

Weeks 12-16 Post-Op:

- Treatment:
 - May begin Resisted Biceps and Forearm Supination exercises
 - Continue all stretching exercises (muscular and capsular)
 - Muscular Endurance Training- Alternating with static and dynamic holds and movements with the exercises, can perform in athletic positions
 - Continue I's, T's, Y's, L's, & W's with endurance training
 - Patient may also begin push-up progression (wall@angle@kneeling@prone)
 - Prone Swiss Ball Walk-Outs, Prone and Side Planks
 - Manual Resistive Exercises and end-Range Rhythmic Stabilization, Continue Throwers' Ten Program-> Progressing to Advanced Throwers' Ten by week 14-16
 - Begin Phase II UE Plyometric Protocol (See attached sheets)
 - Teach basic Dynamic Stretching Program (total body)

Weeks 16-20 Post-Op:

- Treatment:
 - Continue all above treatment and stretches
 - Continue Advanced Throwers' Ten Program
 - Progress to Phase III of the UE Plyometric Protocol

- Continue/Progress Core, Hip, and Scapular Stabilization exercises
- Begin some light interval sport exercises- (Throwing etc.)-**See Interval Throwing, or Raquet Protocols**
- Initiate and evaluate with LE Plyometric Protocol
- Begin Interval Running Protocol- **See Interval Running Protocol**

Criteria for entering Phase IV- Dynamic Strengthening Phase

- Full Non-Painful AROM & PROM
- No Pain or tenderness with any previously performed activity
- Muscular Strength \geq 75%-80% of the uninjured side
- Completion of all Phases of the UE Plyometric Protocol

Phase IV- Dynamic Strengthening Phase- (approximately weeks 20-26)

Goals:

- Maintain Shoulder ROM and Mobility
- Continue to improve Muscular Strength, Endurance and Power
- Progress functional activities and exercises
- Achieve good static stability: Shoulder & Scapular
- No Apprehension or instability with overhead movements
- Ensure adequate Core, Hip, and Scapular stability, to eliminate compensatory movements/postures, which can stress the shoulder with dynamic movements

Treatment:

- Continue all exercises from previous phase PRN
 - Isotonic Strengthening
 - PNF and Manual Resistance exercises
 - Phase III of the UE Plyometric Protocol
 - Progress Interval Sport Protocols
 - Teach Sport Specific Dynamic Stretching Program- (**See Specific Sports Dynamic Stretching sheet**)

See Return to Specific Sport Protocol For Criteria for Clearance for Return to Sport