This rehabilitation program is designed to return the individual to their full activities as quickly and safely as possible, following shoulder labral repair. Modifications to this guideline may be necessary dependent on physician specific instruction or other procedures performed. This evidence-based guideline is criterion-based; time frames and visits in each phase will vary depending on many factors. The therapist may modify the program appropriately depending on the individual’s goals for activity following this surgery.

This guideline is intended to provide the treating clinician a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient’s post-operative care based on exam/treatment findings, individual progress, and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

**Precautions:**

* Rehabilitation progression should be based upon obtaining goals/milestones.
* Passive ROM only by therapist until s/p 10 days
* Active Assisted ROM and Isometrics initiated at 10-14 days per patient tolerance.
* Active ROM initiated at 3 weeks, per Physician.
* Strengthening initiated at 3-4 weeks, per Physician.
* If patient has a concomitant injury/repair (such as a rotator cuff repair or biceps tenodesis) treatment will vary- consult with surgeon.

**Lesion Types:**

* Type I SLAP lesions consist of degenerative fraying of the superior labrum but the biceps attachment to the labrum is intact. The biceps anchor is intact.
* Type II SLAP lesions are created when the biceps anchor has pulled away from the glenoid attachment.
* Type III SLAP lesions involve a bucket-handle tear of this superior labrum with an intact biceps anchor.
* Type IV SLAP lesions involve a bucket-handle tear of the superior labrum in which the tear extends into the biceps tendon. The torn biceps tendon and labrum are displaced into the joint.
* Complex SLAP lesions involve a combination of two or more SLAP types, usually II and III or II and IV.

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| **Phase** | **Suggested Interventions** | **Goals/Milestones for Progression** |
| **Phase I***Protected Motion Phase* Weeks 0-2  | *Specific Instructions:* Maintain use of sling at all times until physician instructs to d/c *No AROM ER, extension, abduction**No isolated biceps contractions (i. e. no active elbow flexion)*PT Ordered per physician discretion*Suggested Treatments:* * Modalities: Pain control modalities as needed
* No heat until 1 week s/p
* Range of Motion:
	+ Elbow, wrist, hand AROM
	+ PROM: (done by therapist only prior to 10 days s/p) Flexion as tolerated
	+ ER as tolerated (begins in scapular plane and progress towards 90 deg. of abduction)
	+ IR as tolerated
* AAROM: (initiated late phase at 10-14 days as tolerated)
	+ Flexion/ Extension progression to full compared bilaterally
	+ Abduction/ Adduction progress to full compared bilaterally
	+ ER/ IR progress to full compared bilaterally
* Manual Therapy: Gleno-humeral joint mobilizations as appropriate
* Submaximal isometrics for all rotator cuff, periscapular, and shoulder musculature

*Exercise Examples:* * Putty or grip strength exercises
* AAROM: Wand, Pendulum or Pulleys as tolerated within guidelines above
* Isometrics (initiated late phase at 10-14 days as tolerated)
* Submaximal and pain-free (NO BICEPS)
* Rhythmic Stabilizations
* Home program prescription of exercises
 | *Goals of Phase:* 1. Provide environment of proper healing of debridement site 2. Prevention of post-operative complications 3. Slow muscle atrophy 4. Re-establish ROM 5. Diminish pain and inflammation *Criteria to Advance to Next Phase:* 1. Full PROM 2. Minimal Pain or tenderness 3. 4/5 MMT for flexion, internal and external rotation  |
| **Phase II***Motion and Muscle Activation Phase* Weeks 3-4  | *Specific Instructions:* No carrying or lifting of heavy objects DC sling 4-6 weeksNo AROM ER, extension, or elevationTypical start of PT*Suggested Treatments:* Modalities Indicated: Pain control modalities as needed ROM: Progress to full and non-painful AROM in all directions (rate based on patient’s tolerance)* Any limitations?
	+ Flexion and elevation in the plane of the scapula to 90°
	+ Abduction to tolerance
	+ ER in scapular plane to 25-30°
	+ IR in scapular plane to 55-60°

*Manual Therapy:* Gleno-humeral/ thoracic, AC/SC joint mobilizations and capsular stretching to restore normal shoulder arthrokinematics *Exercise Examples:* * progressive GHJ rhythmic stabilization exercises to include PNF static & dynamically
* Initiate scapular stabilization exercises below 90 degrees at 3 weeks s/p
* Initiate Throwers Ten exercises at week 3- 4 (dependent on patient
* symptoms)
* WB dynamic stabilization exercises at week 4

*Other Activities:* -May begin UBE at 4 weeks with low resistance  | *Goals of Phase:* 1. Regain and improve muscular strength 2. Normalize the arthrokinematics 3. Improve neuromuscular control *Criteria to Advance to Next Phase:* 1. Full and non-painful AROM in allowed range2. No Pain or Tenderness 3. Strength 70% or more compared to contralateral shoulder  |
| **Phase III***Advanced strengthening and eccentric control phase* Weeks 5-7  | *Specific Instructions:* Continue previous exercises *Suggested Treatments:* * Gradually improve PROM and AROM
	+ Flexion and elevation in the plane of the scapula to 145°
	+ Abduction to 145°
	+ External rotation 45-50° at 45° abduction
	+ Internal rotation 55-60° at 45° abduction
	+ Extension to tolerance
* May initiate gentle stretching exercises
* May initiate gentle stretching exercises
* Gentle Proprioceptive Neuromuscular Facilitation (PNF) manual resistance
* Initiate prone exercise program for periscapular musculature
* Begin AROM elbow flexion and extension

*Exercise Examples:* * Initiate IR/ER dumbbell strengthening at 90/90 position
* Initiate biceps strengthening with dumbbells if no pain up to 3# MAX and no other concomitant injury/repair
* Continue to progress neuromuscular and proprioceptive shoulder exercises

*Other Activities:* * Light cardiovascular conditioning program which includes:
* Stationary bike
* Level ground walking
 | Goals of Phase: 1. Improve strength, power and endurance 2. Preparation to return to overhead activities and throwing 3. Improve neuromuscular and eccentric control Criteria to Advance to Next Phase: 1. Full and non-painful AROM in allowed range
 |
| **Phase IV** *Return to Activity phase* Weeks 8-14  | *Suggested Treatments:* *WEEK 8-9** Gradually progress P/AROM
	+ Flexion, elevation in the plane of the scapula, and abduction to 180°
	+ External rotation 90-95° at 90° abduction
	+ Internal rotation 70-75° at 90° abduction
	+ Extension to tolerance
* Begin isotonic rotator cuff, periscapular, and shoulder strengthening program
* Continue PNF strengthening
* Initiate "Thrower's Ten" program except resisted biceps exercise (see protocol)
* Type II repairs: begin sub maximal pain free biceps isometrics
* Type IV, and complex repairs: continue AROM elbow flexion and extension, no biceps isometric or isotonic strengthening

WEEK 10* Progress ER P/AROM to thrower's motion
	+ ER 110-115 at 90° abduction in throwers (weeks 10-12)
* Progress shoulder isotonic strengthening exercises as above
* Continue all stretching exercises as need to maintain ROM**.**
* Progress ROM to functional demands (i.e., overhead athlete)
* Type II repairs: begin gentle resisted biceps isotonic strengthening @ week 12
* Type IV, and complex repairs: begin gentle sub maximal pain free biceps isometrics
 | Goals of Phase:1. Gradually restore full AROM and PROM (week 10)
2. Preserve the integrity of the surgical repair
3. Restore muscular strength and balance

Criteria to Advance to Next Phase: 1. Full non painful ROM
2. Good stability
3. Muscular strength 4/5 or better
4. No pain or tenderness
 |
| **Phase V**Minimal Protection Phase (weeks 14-20) | *Suggested Treatments:* Weeks 14-16* Continue all stretching exercises (capsular stretches)
* Maintain thrower's motion (especially ER)
* Continue rotator cuff, periscapular, and shoulder strengthening exercises
* Type II repairs: progress isotonic biceps strengthening as appropriate
* Type IV, and complex repairs: progress to isotonic biceps strengthening as appropriate
* "Thrower's Ten" program with biceps exercise or fundamental exercises
* PNF manual resistance
* Endurance training
* Initiate light plyometric program
* Restricted sports activities (light swimming, half golf swings)

Weeks 16-20 * Continue all exercises listed above
* Continue all stretching
* Continue "Thrower's Ten" program
* Continue plyometric program
* Initiate interval sport program/throwing
 | Goals of Phase:1. Establish and maintain full ROM
2. Improve muscular strength, power, and endurance
3. Gradually initiate functional exercises

Criteria to Advance to Next Phase: 1. Full non painful ROM
2. Satisfactory static stability
3. Muscular strength 75-80% of contralateral side
4. No pain or tenderness
 |
| **Phase VI**Advanced Strengthening Phase (Weeks 20-26) | *Suggested Treatments:* * Continue flexibility exercises
* Continue isotonic strengthening program
* PNF manual resistance patterns
* Plyometric strengthening
* Progress interval sports programs
 | Goals of phase:1. Enhanced muscular strength, power, and endurance
2. Progress functional activities
3. Maintained shoulder stability

Suggested Criteria for Discharge: 1. Gradually restore full AROM and PROM
2. Preserve the integrity of the surgical repair
3. Restore muscular strength and balance
 |
| **Phase VII**Return to Activity Phase (Months 6-9) | Independent HEP | Goals of Phase:1. Gradually progress sport activities to unrestrictive participation
2. Continue stretching and strengthening program
 |

**REFERENCES:**

Dockery ML, Wright TW, LaStayo PC. Electromyography of the shoulder: an analysis of passive modes of exercise. *Orthopedics.* 1998;21:1181-1184.

Long JL, Ruberte Theile RA, Skendzel JG, et al. Activation of the shoulder musculature during pendulum exercises and light activities. *J Orthop Sports Phys Ther.* 2010 Apr;40(4):230-7

Wilk KE, Reinold MM, Dugas JR, et al. Current concepts in the recognition and treatment of Superior Labral (SLAP) Lesions. *J Orthop Sports Phys Ther* 2005;35:273-291

1Wilk K, et all. Current Concepts in the Recognition and Treatment of Superior Labral (SLAP) Lesions. JOSPT 2005;35:273-291.