Rehabilitation Protocol for Latarjet Repair

This protocol is intended to guide clinicians through the post-operative course for a Latarjet Repair reconstruction. This protocol is time based (dependent on tissue healing) as well as criterion based. Specific intervention should be based on the needs of the individual and should consider exam findings and clinical decision making. The timeframes for expected outcomes contained within this guideline may vary based on surgeon's preference, additional procedures performed, and/or complications. If a clinician requires assistance in the progression of a post-operative patient, they should consult with the referring surgeon.

The interventions included within this protocol are not intended to be an inclusive list of exercises. Therapeutic interventions should be included and modified based on the progress of the patient and under the discretion of the clinician.

Latarjet Repair Background
In cases where significant bony deficiency is present (where greater than 20% of the glenoid's surface area is missing) addressing only the soft tissue issues during the surgical procedure (such as Bankart repair) may lead to eventual recurrence of instability. Bony deficiency can result from congenital deformity, trauma, or recurrent dislocation. When bony lesions reach critical dimensions, reconstruction of this deficit using autograft bone yields the best surgical results. The Latarjet procedure is the most popular and highly effective, transferring the distal coracoid into the bony defect.

Considerations for the Post-operative Latarjet Repair
Many different factors influence the post-operative course of an Open Latarjet Repair. Choice of surgical technique and need for concomitant procedures may affect the initial ROM restrictions as well as the timeframes for rehabilitation. **It is recommended that clinicians collaborate closely with the referring physician regarding specific ROM restrictions, duration of sling use, and the timeframe for initiating strengthening.** Complications to consider include possible non-union (3%), long-term pain requiring screw extraction. Functionally, the primary limitation noted following this procedure is a significant reduction in glenohumeral external rotation. As this is an anterior stabilizing procedure (and primarily a bony procedure), it is important to consider the soft tissue structures involved early on in rehabilitation, particularly if subscapularis was involved. External rotation is progressed gradually.

If you develop a fever, excessive drainage from incision, severe heat and/or redness along incision, uncontrolled pain, or any other symptoms that concern you please call your doctor.

PHASE I: IMMEDIATE POST-OP (0-6 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Protect the repair • Prevent negative effects of immobilization • Initiate early protected and restricted range of motion (ROM) • Diminish pain and inflammation
Sling	• Use at night while sleeping • Discharge at week 6 (or as directed by MD)
Precautions - may vary per MD	• **No passive range of motion (PROM) external rotation (ER) past neutral until week 5** • **No shoulder active range of motion (AROM) in any plane until week 5** • No lifting of objects • No supporting of body weight with hands
Intervention	*Weeks: 0-2* *Range of Motion/Mobility* • Elbow/Hand AROM • Gentle shoulder PROM flexion, elevation in the scapular plane and ER to neutral

	• Pendulums
	
	Strengthening
	• Hand gripping exercises
	
	Swelling/Pain Management
	• Cryotherapy, modalities as indicated
	
	Weeks: 3-4
	Range of Motion/Mobility
	• Begin AAROM: towel counter slide, pulley flexion, pulley scaption, cane flexion, cane scaption, beach chair progression. **Patient should not force motion. Avoid using compensatory strategies.**
	• PROM guidelines (will vary per surgeon and if additional procedures performed):
	  ○ Flexion to 120 degrees
	  ○ Internal rotation (IR) to 45 degrees in 0-30 degrees of ABD (scapular plane)
	  ○ ER to neutral
	
	Strengthening
	• Scapular Retraction
	• Begin submaximal, pain-free, shoulder isometrics with arm at side in neutral rotation:
	  ○ Flexion, abduction, extension, external rotation, internal rotation
	
	Manual Therapy
	• Initiate scar mobilization once incision is healed
	
	Weeks: 5-6
	Range of Motion/Mobility
	• Begin AROM with minimal pain and avoiding substitution patterns
	• AROM/PROM guidelines:
	  ○ Flexion to tolerance
	  ○ IR to 50 degrees at 30 deg ABD (scapular plane)
	  ○ ER to 45 degrees at side and at 30 deg of ABD (scapular plane)
	
	Strengthening
	• Continue shoulder isometrics

Criteria to Progress	• Improved PROM/AROM within established parameters • Minimal pain or tenderness

PHASE II: INTERMEDIATE POST-OP (7-8 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Continued improvement with PROM/AROM • Preserve the integrity of the surgical repair • Good tolerance with addition of isotonic strengthening
Precautions	• Avoid excessive ER ROM stretching - **consult with surgeon for any continued ER ROM limitations in this phase.** • Avoid activities or exercises that place excessive load on the anterior capsule or subscapularis

Additional Intervention **Continue with Phase I interventions as indicated*	*Range of Motion/Mobility*
	• Continue to progress AAROM/AROM/PROM as indicated. ER ROM should remain gentle.
	
	Strengthening
	• Initiate beginner level isotonic strengthening as AROM improves and progress as tolerated in all planes
	  ○ Scaption to 90 degrees
	  ○ Sidelying external rotation (within established limitations if any remain)
	  ○ Scapular protraction/retraction supine
	  ○ Scapular protraction/retraction against wall

	○ Prone rows: 30-degrees abduction, 45-degrees abduction, 90-degrees abduction to neutral *Stretching* • Cross body adduction stretch • Sleeper stretch
Criteria to Progress	• Shoulder AROM/PROM is progressing • Demonstrates good scapular control within range of motion available. • Able to complete phase I activities without pain.

PHASE III: LATE POST-OP (9-12 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Continue to gradually restore full shoulder AROM/PROM • Preserve the integrity of the surgical repair • Restore muscular strength and balance • Enhance neuromuscular control, proprioception, and kinesthesia
Precautions	• Limit overstressing the anterior capsule with aggressive overhead strengthening
Additional Interventions **Continue with Phase I-II interventions as indicated*	*Range of Motion/Mobility* • Continue ROM exercises as needed *Strengthening* • Continue to progress isotonic strengthening program by adding resistance. • Bicep curls • IR at 0-degrees abduction, progress as able to IR at 90-degrees abduction • ER progression: ER at 0-degrees abduction, bilateral shoulder "Ws", ER at 90-degrees abduction • Scapular protraction/retraction in quadruped progressing to scapular protraction/retraction in plank position • Standing rows progression: low rows at side, rows at 45-degrees abduction, rows at 90-degrees abduction • Pushup progression: standing/wall pushups, incline pushups, floor on knees pushups, full on floor pushups • Prone horizontal abduction • Wall "Ys", progress as able to prone "Ys" • Progress PNF patterns to resistance bands as tolerated *Manual* • PNF patterns with light manual resistance and progress as tolerated • Rhythmic stabilization • Shoulder joint mobilizations as indicated
Criteria to Progress	• Full non-painful ROM except for ER (may still be limited in some instances) • Satisfactory stability and no apprehension • Muscular strength progressing (> 60% LSI) • Good tolerance with strengthening progression

PHASE IV: STRENGTHENING (13-20 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Maintain full ROM with continued stretching • Improve muscular strength, power, and endurance • Gradually initiate sports specific movement patterns
Additional Interventions **Continue with Phase II-III Interventions*	*ROM/Mobility* • Capsular stretches (if indicated) • Horizontal adduction stretching • Shoulder ER @ 90 deg abduction stretching • Shoulder IR stretch behind back *Strengthening*

	• PNF resisted - progressing to higher speeds as able • Endurance training • Plyometrics: wall plyometric push-ups, high kneeling plyometric push-ups, ½ kneeling med ball catch/throw with both hands *Sports Specific* • Light sports activities (ex: light swimming, half golf swings) • Initiate interval return to sport program (16–18 weeks)
Criteria to Progress	• Full, pain-free functional ROM • No complaint of glenohumeral instability • 80% or > strength of ER and IR compared to contralateral shoulder with dynamometry testing • 80% or > performance with field testing • Clearance from MD and ALL milestone criteria have been met

PHASE V: EARLY RETURN TO SPORT (21-28 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Enhance muscular strength, power, and endurance • Unrestricted activities
Additional Interventions **Continue with Phase II-IV interventions*	*ROM/Mobility* • Soft tissue mobilization and stretching as needed to maintain ROM *Strengthening* • Modified Bench Press with block • Narrow grip barbell snatch • Plyometrics: unilateral med ball catch/throw in half kneeling, rebounder throws, overhead ball dribbles, deceleration catches, standing ball drops, prone 90/90 ball drops
Criteria to Progress	• 90% or > strength of ER and IR compared to contralateral shoulder with dynamometry testing • 90% or > performance with field testing • 90% or > on reported outcome measures (DASH, Penn Shoulder Score, SPADI)

Revised 12/2021

Contact	Please email MGHSportsPhysicalTherapy@partners.org with questions specific to this guideline.

References:

1. Beletsky A, Cancienne JM, Manderle BJ, Mehta N, Wilk KE, Verma NN. A Comparison of Physical Therapy Protocols Between Open Latarjet Coracoid Transfer and Arthroscopic Bankart Repair. Sports Health. 2020 Mar/Apr;12(2):124-131.
2. Banas MP, Dalldorf PG, Sebastianelli WJ, DeHaven KE. Long-term followup of the modified Bristow procedure. Am J Sports Med. 1993; 21(5):666-671.
3. Boston Shoulder Institute. Physical Therapy Protocol After Latarjet Procedure.
4. Decker MJ, Tokish JM, Ellis HB, Torry MR, Hawkins RJ. Subscapularis muscle activity during selected rehabilitation exercises. Am J Sports Med. 2003; 31(1):126-134.
5. Hovelius L, Sandstrom B, Saebo M. One hundred eighteen Bristow-Latarjet repairs for recurrent anterior dislocation of the shoulder prospectively followed for fifteen years: Study II the evolution of dislocation arthropathy. J Shoulder Elbow Surg. 2006; 15(3):279-289.
6. Matthes G, Horvath V, Seifert J, et al. Oldie but goldie: Bristow-Latarjet procedure for anterior shoulder instability. J Orthop Surg (Hong Kong). 2007; 15(1):4-8.
7. MGH Department of Orthopedics. Anterior Shoulder Stabilization: The Latarjet.
8. Yoneda M, Hayashida K, Wakitani S, Nakagawa S, Fukushima S. Bankart procedure augmented by coracoid transfer for contact athletes with traumatic anterior shoulder instability. Am J Sports Med. 1999; 27(1):21-26.