# SHOULDER LATARJET POST-OPERATIVE GUIDELINES

The following Latarjet Guidelines were developed by HSS Rehabilitation. Progression is both criteria-based and patient specific. Phases and time frames are designed to give the clinician a general sense of progression. The rehabilitation program for a Latarjet stabilization procedure emphasizes early, controlled motion to prevent shoulder stiffness and avoid disuse atrophy of distal musculature while respecting post-operative precautions. The program should balance the aspects of tissue healing and appropriate interventions to maximize flexibility, strength, and pain-free performance of functional activities. This model should not replace clinical judgment.

**FOLLOW SURGEON MODIFICATIONS AS PRESCRIBED.**

# SHOULDER LATARJET POST-OPERATIVE GUIDELINES

## Acute Care Phase

### PRECAUTIONS

- Use sling at all times except when bathing, dressing, icing, or performing home exercise program (HEP)
- Avoid lying on operative side
- Use pillows to support operative arm when sitting or sleeping
- Avoid weight bearing on operative upper extremity (UE)
- No active shoulder motion
- Avoid pain during range of motion (ROM) exercises
- No shoulder external rotation (ER) past 0˚-30˚

### ASSESSMENT

- Numeric pain rating scale (NPRS)
- Wound status
- Edema
- Post-anesthesia sensory motor screening
- Functional status: activities of daily living (ADL) and mobility

### TREATMENT RECOMMENDATIONS

- Instruct in semi-reclined sleeping position, avoiding lying on operative side
- Educate on donning/doffing and proper positioning in sling
- ADL training
- Transfer training (in and out of bed and sit ←→ stand) and stair training while maintaining non-weight bearing on operative UE
- Gait training as needed with assistive device with consideration for new UE non-weight bearing status
- Shoulder passive range of motion (PROM) exercises according to surgeon preference, e.g. Codman's, passive ER to neutral
- Pain-free distal active range of motion (AROM)
- Cryotherapy and elevation of UE to prevent edema
- Initiate and emphasize importance of HEP to be continued until initiation of outpatient physical therapy (PT) or occupational therapy (OT)

**CRITERIA FOR ADVANCEMENT**

- Safely transfers unassisted
- Ambulates independently with/without device on level surfaces and stairs
- Independent with sling management, or caregiver independent in assisting
- Independent with ADL, or caregiver independent in assisting
- Independent with HEP

**EMPHASIZE**

- Familiarization with post-operative plan of care
- Control edema

# SHOULDER LATARJET POST-OPERATIVE GUIDELINES

## Post-Operative Phase 1: Weeks 1-6

### PRECAUTIONS

- Follow precautions until cleared by surgeon
- Sling to be worn at all times except when exercising, icing, dressing and showering (4 weeks or per surgeon direction)
- Avoid prolonged sling use once discharged by surgeon
- Avoid weight bearing through operative UE
- Limit shoulder PROM based on pain and surgeon guidelines, with emphasis on limiting external rotation to 30° in order to protect subscapularis repair
- Avoid extension past neutral to protect repair
- Elevation in the scapular plane to 90°
- Avoid severe pain with therapeutic exercise and functional activities
- Avoid loading elbow flexion and supination
- Avoid holding items greater than 1 lb.

### ASSESSMENT

- Quick Disabilities of Arm, Shoulder and Hand (Quick DASH)
- NPRS
- Wound status
- Sensation
- Cervical screen
- Shoulder PROM within surgical limits
- Distal AROM (un-loaded elbow and wrist)
- Grip strength

### TREATMENT RECOMMENDATIONS

- Shoulder PROM Goals (do not force but assess for stiffness)
    - Week 2
        - 60˚ forward flexion
    - Week 4-6:
        - Elevation in scapular plane: as tolerated
        - ER in scapular plane: 30˚- 45˚ (pending subscapularis repair)
        - Internal rotation (IR) in scapular plane: to chest

- Active assisted range of motion (AAROM) shoulder external rotation (ER) with wand in scapular plane within prescribed limits
- Distal AROM exercises (unless PROM specified by surgeon for elbow)
- Mobility:
    - Week 5-6 may begin glenohumeral joint mobilizations (pending surgeon input)
    - Mobility of sternoclavicular joint
    - Flexibility/mobility of thoracic spine
- Codman's pendulum exercises
- Scapular mobility and stability exercises progressing to manual resistance
- Begin sub-maximal shoulder isometrics at 2 weeks and 30° of ER obtained
    - Flexion, extension, IR, ER
    - Rhythmic stabilization
- Core strengthening
- Modalities for pain and edema

**CRITERIA FOR ADVANCEMENT**

- Edema and pain controlled
- Passive shoulder external rotation to 30°
- Passive shoulder elevation in plane of scapula to 90° (pending surgical input)
- Independent with ADLs
- Independent with HEP

**EMPHASIZE**

- Control edema
- Proper donning/doffing of sling and use per surgeon instruction
- Protect surgical repair
- Importance of patient compliance with HEP and protection during ADLs

# SHOULDER LATARJET POST-OPERATIVE GUIDELINES

## Post-Operative Phase 2: Weeks 7-12

### PRECAUTIONS

- Avoid pain with ADLs and therapeutic exercise
- No shoulder ER greater than 45° (pending surgical input)
- No lifting greater than 5 lbs.
- Avoid supporting full body weight on operative UE
- If lacking PROM at 12 weeks
    - Assess capsular mobility
    - Assess end feel (bony or capsular)
- Discuss further progression of motion with surgeon

### ASSESSMENT

- Quick DASH
- NPRS
- Shoulder AROM and PROM
- Functional mobility
- Soft tissue assessment
- Thoracic and Cervical mobility

### TREATMENT RECOMMENDATIONS

- Discharge sling if still in use
- Re-education of movement patterns
    - Focus on joint position sense
- Functional mobility training
- Manual therapy as needed (e.g., scapular mobilization, soft tissue mobilization)
- Cervical AROM and upper trapezius stretching
- Shoulder ROM exercises
    - AAROM/PROM using wand: forward flexion and external rotation, abduction, extension
    - Wall slides/wall walks to tolerance
    - Initiate AROM in all planes
- Stabilization exercises
    - Humeral head control exercises
        - Progress rhythmic stabilization from supine starting at 90° of elevation, through available arc of motion
    - Closed kinetic chain exercises (e.g., ball stabilization)

    - Scapular stabilization
- Strengthening exercises
    - Progress to rotator cuff isotonics when adequate ROM is attained
    - General UE strengthening
    - Core strengthening
- Upper body ergometry
- Aquatic therapy for ROM and strengthening, if available, when wounds are fully healed
- Modalities for pain and edema
- Progression of HEP

**CRITERIA FOR ADVANCEMENT**

- Pain controlled
- PROM WFL for shoulder flexion and abduction
- Shoulder AROM in plane of scapula: elevation to 150°, external rotation to 45°
- Independent with HEP

**EMPHASIZE**

- Gradually restore shoulder AROM
- Initiate strengthening of shoulder girdle
- Reduce compensatory movements (e.g., overuse of upper trapezius)

# SHOULDER LATARJET POST-OPERATIVE GUIDELINES

## Post-Operative Phase 3: Weeks 13-18

### PRECAUTIONS

- Avoid supporting full body weight on operative UE
- No heavy overhead lifting

### ASSESSMENT

- Quick DASH
- NPRS
- Thoracic spine mobility
- Scapulohumeral rhythm
- Shoulder AROM and PROM
- UE and periscapular strength
- Functional mobility

### TREATMENT RECOMMENDATIONS

- Motor re-education
- Functional training to address patient's goals
- Manual therapy to restore shoulder girdle range of motion
- Progress shoulder ROM and flexibility to within normal limits
- Proprioceptive neuromuscular facilitation (PNF) patterning
- Progressive resistive exercises for UE, shoulder girdle and core
- Shoulder strengthening through progressive ROM
- Initiate closed chain upper body exercises with gradual loading (avoid full body weight)
- Humeral head rhythmic stabilization exercise progression (e.g., closed chain, upright position)
- Upper body ergometry and general conditioning
- Running progression per surgeon clearance
- Progress to more advanced long term HEP

### CRITERIA FOR DISCHARGE (OR ADVANCEMENT TO PHASE 4 IF RETURNING TO SPORT)

- Fully independent with ADLs with minimal pain
- Ability to perform ADLs above 90 degrees
- UE and periscapular muscle manual muscle testing (MMT) 4+/5 for control with functional movements
- Independent with full HEP

**EMPHASIZE**

- Restore normal ROM and flexibility
- Restore strength
- Avoid posterior capsule tightness
- Reduce compensatory patterning

# SHOULDER LATARJET POST-OPERATIVE GUIDELINES

## Phase 4: Return to Sport (if applicable)

**PRECAUTIONS**

- Avoid too much too soon - monitor exercise dosing
- Discuss return to high impact sports with surgeon
- Note that expert opinion varies widely on allowable sports, consult with surgeon

**ASSESSMENT**

- Quick DASH, including Sports Module
- NPRS
- Scapulothoracic coupling
- UE ROM and flexibility
- Strength
- Cardiovascular endurance
- Quality of movement throughout the kinetic chain during sport-specific activities

**TREATMENT RECOMMENDATIONS**

- Humeral head control exercise progression in a variety of overhead positions
- Isotonic exercise progressions to higher loads as indicated
- Sustained single arm holds with perturbations
- Closed kinetic chain progression exercises
- Initiate upper extremity plyometrics
    - Plyometric progression (over a 4 week period)
        - Double hand chest pass
        - Double hand overhead soccer pass
        - Double hand chops
        - Single hand IR at 0° shoulder abduction
        - Eccentric catch
        - Single hand 90/90 IR
- Endurance progression
    - Double hand overhead wall taps
    - Single arm 90/90 wall taps
    - Single arm 12 o'clock to 3 o'clock wall taps
    - Exercise blade at multiple angles
- Exercise blade at multiple angles
- Dynamic balance activities

- Neuromuscular shoulder re-education for control with dynamic sports-specific exercises
- Cardiovascular conditioning progressions
- Sport-specific multidirectional core retraining
- Progress total body multidirectional motor control exercises to meet sport-specific demands
- Collaboration with trainer, coach, or performance specialist

**CRITERIA FOR RETURN TO SPORT**

- Independent in long-term sport-specific exercise program
- Movement patterns, strength, flexibility, motion, power, and accuracy to meet demands of sport
- No increase in pain with sports activities

**EMPHASIZE**

- Monitoring of load progression and volume of exercise
- Neuromuscular patterning
- Collaboration with appropriate Sports Performance expert

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## References


1. Banas MP, Dalldorf PG, Sebastieanelli WJ, et al. Long-term follow up of the modified Bristow procedure. *Am J Sports Med*. 1993;21(5):666-671.
2. Bliven KCH, Parr GP. Outcomes of the Latarjet procedure compared With Bankart repair for recurrent traumatic anterior shoulder instability. *J Athl Train*. 2018;53(2):181-183.
3. Decker MJ, Tokish JM, Ellis HB, et al. Subscapularis muscle activity during selected rehabilitation exercises. *Am J Sports Med*. 2003;31(1):126-134.
4. Hall CM. Therapeutic Exercise: Moving Toward Function. 2nd ed. Philadelphia: Lippincott, Williams and Wilkins; 2005.
5. Hovelius L, Sandstrom B, Sacbo 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. Jones D WJ. Shoulder Instability. In: Chapman MW, Lane JM, Mann RA, Marder RA, McLain RF, Rab GT, Szabo RM, Vince KG. Chapman's Orthopaedic Surgery. Vol 2, 3rd ed. Philadelphia: Lippincott, Williams and Wilkins; 2001.
7. Kleiner MT, Payne WB, McGarry MH, et al. Biomechanical comparison of the Latarjet procedure with and without capsular Repair. *Clin Orthop Surg*. 2016;8(1):84-91.
8. 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.
9. Montgomery C, Galbraith J, Hurley E, et al. Collision athletes the deterioration of intra-articular findings at revision shoulder stabilisation, *J Science Med Sport*. 2018;21:S76.
10. Schauder KS, Tullos HS. Role of the coracoid bone block in the modified Bristow procedure. *Am J Sports Med*. 1992; 20(1):31-34.
11. Yang JS, Mazzocca AD, Arciero RA "Treatment and results of combined mild bone loss instability with the modified Laterjet." *Orthop J Sports Med.* 2015;3(7). 3(7 suppl2): 2325967115S00049.
12. Yoneda M, Hayashida K, Wakitani S, et al. Bankart procedure augmented by coracoid transfer for contact athletes with traumatic anterior shoulder instability. *Am J Sports Med.* 1999;27(1):21-26.



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