

Rehabilitation Protocol:
Open Latarjet Rehabilitation Guidelines

Department of Orthopaedic Surgery

Lahey Hospital & Medical Center, Burlington 781-744-8650

Lahey Outpatient Center, Lexington 781-372-7020

Lahey Medical Center, Peabody 978-538-4267

Department of Rehabilitation Services

Lahey Hospital & Medical Center, South Bedford Street, Burlington 781-744-8648

Lahey Danvers Rehabilitation, Danvers 978-739-7400

Lahey Outpatient Center, Lexington 781-372-7060

◀ Overview

The shoulder (glenohumeral) joint is a ball and socket joint made up of the humeral head (ball) and the glenoid (socket). Shoulder instability is typically caused by either traumatic dislocation of the humeral head or congenital ligamentous laxity. Surgical stabilization of the glenohumeral joint is indicated for patients with recurrent instability and reduced quality of life after the failure of non-operative treatment options. Recurrent shoulder instability may be the result of soft tissue deficiency, bony deficiency, or a combination of both.

Soft tissue deficiency in the setting of shoulder instability typically includes injury to the labrum and capsule of the shoulder. Patients with isolated soft tissue injury can often be candidates for arthroscopic surgical stabilization procedures.

Bony deficiency of the glenohumeral joint is most commonly due to bone loss on the glenoid surface. Bone loss can occur as the result of multiple dislocations over time or may be caused by a single dislocation event. The glenoid is a relatively small structure and even a small amount of bone loss can lead to recurrent instability. In the setting of significant glenoid bone loss, the surgeon often needs to reconstruct the glenoid in order to achieve shoulder stability.

The Latarjet procedure is one common approach to reconstruct the glenoid. During the open approach for the Latarjet procedure, the bony surfaces of the glenohumeral joint are visualized and the degree of bone loss is confirmed. Next, the surgeon transfers a piece of bone called the coracoid process from the front of the shoulder into the glenohumeral joint. The coracoid is then fixed with screws to the front of the glenoid to make up for the bone that has been lost in this location. During the procedure, soft tissue and muscle are manipulated including the pectoralis, the subscapularis, and the glenohumeral joint capsule. During rehabilitation a balance between protection of the transferred bony fragment and restoration of range of motion and strength are emphasized.

◀ Phase I Protective Phase: 0–6 Weeks

Goals

Educate patient on ways to avoid stress on repaired tissue
Protect anatomic repair
Allow healing of repaired tissue
Minimize muscular atrophy
Decrease pain/inflammation
Promote dynamic stability
Enhance scapular function, normalize scapular position, mobility, and dynamic stability

Precautions

Sling at all times, remove only for shower and elbow, wrist, and hand ROM as instructed
Keep arm held at side when out of sling for showering
No passive range of motion of shoulder for 2 weeks
No active range of motion of shoulder for 6 weeks
Wean from sling beginning at 6 weeks

Weeks 0-2

- **Absolute immobilization** of GH joint for 2 weeks
- Cryotherapy
- Arm in sling at all times except for shower or AROM elbow, wrist, and hand
- Elbow at side when arm out of sling

Weeks 2–6

- Continue cryotherapy
- PROM/AAROM: Do not force any painful motion
 - Flexion and Scaption: as tolerated
 - Abd: as tolerated
 - Rotation:
 - ER in neutral 0°
 - ER in 30-40° shoulder abduction: 0-25°
 - IR in 30-40° shoulder abduction: 0-45°
- Progress to IR/ER range at **6 weeks**
- D/C sling at 6 weeks as advised by surgeon

Therapeutic Exercise

Active:

C-spine, elbow, wrist and hand
Scapular retraction
Scapular clocks (elevation, depression, protraction, retraction)
Ball squeezes
Scapular Rhythmic stabilization (RS)
Sub-maximal isometric exercise at 0° abduction:
Flexion, Abduction, IR, ER

AAROM:

Overhead pulley/wand begins at **3 weeks** or unless advised by surgeon

◀ Phase II – Intermediate Phase Weeks 6 – 12

Goals

Gradual increase in ROM to WNL
Decrease pain/inflammation
Progress open and closed chain stability
Progress strength and endurance
Progress functional activities
Address C-spine and T-spine joint mobility to facilitate full UE ROM

Precautions

Progress ROM as tolerated, do not force any painful motions.
No plyometric activities
No heavy lifting

Manual

- C-spine and T-spine joint mobilizations
- G/H joint mobilizations only to progress ROM as indicated
- Stretch posterior capsule as needed

PROM & AAROM as needed to achieve indicated goals

Initiate AROM with good mechanics

Shoulder flexion as tolerated (initiate in supine)

Abduction as tolerated (initiate AROM in sidelying)

Rotation:

ER in neutral as tol
ER in Scapular plane: 35° to 50°
ER at 90° abd as tol
IR in neutral to tol
IR in Scapular plane as tol

Therapeutic Exercise

- Progress AAROM → AROM
- Prone rows, extension, “T”s
- Active-assisted progressing to active forward flexion and scaption with scapulohumeral rhythm
- Strengthen rotator cuff at neutral (elbow supported by towel roll at 0° abduction)
- Rhythmic Stabilization in various planes of ER/IR/Flexion/Abduction
- Closed chain: ball roll, quadruped but NO pushups
- Biceps and Triceps strengthening with elbow at side

◀ **Phase III**
12 – 24 weeks

Goals

Normalize strength, endurance, neuromuscular control and power
Gradual buildup of stress to anterior capsule
Gradual return to full ADLs, Work and Recreational Activities

Precautions

Avoid abrupt jerking stress on shoulder
Do not progress advanced rehabilitation exercises (plyometrics or stress to end ROM) unless necessary for work or recreation
Avoid exercises that place excessive stress on anterior capsule: Dips, exercises behind head (always see your elbows)

- Gradually progress to Full ROM
- Joint Mobilizations as necessary

Therapeutic Exercise

- Progress to resisted ER at 90° abd (90°/90°)
- Continue shoulder strengthening
- Progress rehabilitation activities to address work/recreational demands
- Light weights/ High reps
- Progress plyometrics if necessary for work/recreational demands

Interval sports programs can begin per MD

AAROM = active-assisted range of motion, ADL = activity of daily living, AROM = active range of motion, PROM = passive range of motion, ER = external rotation, IR = internal rotation, ROM = Range of Motion G/H = glenohumeral

**Rehabilitation Protocol for Open Latarjet Procedure
 Rehabilitation Guidelines: Summary Table**

Post-Op Phase/Goals	Range of Motion	Therapeutic Exercise	Precautions
<p>Phase I 0-6 weeks after surgery</p>	<p><u>Weeks 0-2:</u> glenohumeral immobilization for 2 weeks AROM elbow, wrist, hand only.</p> <hr/> <p><u>Weeks 2-6</u> PROM/AAROM: Flexion and Scaption: as tolerated Abd: as tolerated Rotation: ER in neutral 0° ER in 30-40° shoulder abduction: 0-25° IR in 30-40° shoulder abduction: 0-45°</p>	<p>Cryotherapy AROM elbow, wrist, and hand</p> <hr/> <p>Scapular retraction Scapular clocks (elevation, depression, protraction, retraction) Ball squeezes Scapular rhythmic stabilization (RS)</p> <p>Sub-maximal isometric exercise at 0° abduction: Flexion, Abduction, IR, ER</p> <p>Overhead pulley/wand begins at 3 weeks or unless advised by surgeon</p>	<p>Arm in sling at all times other than:</p> <ul style="list-style-type: none"> • Showering • AROM elbow, wrist, and hand <hr/> <p>Weaned from sling at 6 weeks as advised by physician</p>
<p>Phase II 6-12 Weeks after surgery</p>	<p><u>Week 6-12</u> PROM & AAROM as needed to achieve indicated goals</p> <p>AROM with good mechanics: Shoulder flexion as tolerated (initiate in supine) Abduction as tolerated (initiate AROM in sidelying)</p> <p>ER in neutral as tol</p>	<p>Prone rows, extension, "T"s</p> <p>AAROM to AROM progressing to active forward flexion and scaption with scapulohumeral rhythm</p> <p>Strengthen rotator cuff at neutral (elbow supported by towel roll at 0° abduction)</p>	<p>Closed chain: NO pushups</p>

	<p>ER in Scapular plane: 35° to 50°</p> <p>ER at 90° abd as tol</p> <p>IR in neutral to tol</p> <p>IR in Scapular plane as tol</p>	<p>Rhythmic Stabilization in various planes of ER/IR/Flexion/Abduction</p> <p>Closed chain: ball roll, quadruped but NO pushups</p> <p>Biceps and Triceps strengthening with elbow at side</p>	
<p>Phase III 12-24 Weeks after surgery</p>	<p><u>Week 12-24</u> Gradually progress to full ROM</p>	<p>Progress rehabilitation activities to address work/recreational demands</p> <p>Light weights/High reps</p> <p>Progress plyometrics if necessary for work/recreational demands</p>	<p>Interval sports programs can begin per MD</p>
<p>AAROM = active-assisted range of motion, ADL = activity of daily living, AROM = active range of motion, PROM = passive range of motion, ER = external rotation, IR = internal rotation, Abd = Abduction, as tol: as tolerated, ROM= Range of Motion, G/H = glenohumeral</p>			