

Anterior Stabilization of the Shoulder: Latarjet Protocol

This protocol provides the therapists with a general guideline for patients after this type of procedure. Each patient's surgery and postoperative progress may be different, and this protocol is not intended to substitute for one's clinical decision making based on exam findings, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient they should consult with the referring surgeon.

Progression to the next phase is based on Clinical Criteria and/or Time Frames as Appropriate.

Rehabilitation Considerations

Latarjet procedure reinstates anterior stability to the glenohumeral joint. While this is primarily a bony procedure, specific attention must be directed towards the soft tissues which play a critical role in maintaining stability. Early post-operative therapy must protect the repair of the subscapularis as well as the developing bony union of the coracoid process. Since it will take approximately 6-8 weeks to form an osseous union of the newly reconstructed glenoid, the biceps and coracobrachialis attachment to the coracoid needs to be protected during the initial postoperative period. Aggressive shoulder extension and combined extension and external rotation stretching is not indicated. Once strengthening commences, a gradual progressed program of biceps and coracobrachialis strengthening needs to be followed to minimize undue stress and tension on their muscular origins. In addition, isolated external rotation range of motion needs to be gradually regained after surgery to allow the anterior capsule and subscapularis to heal appropriately. For that reason, external rotation range of motion is advanced in a protected fashion, with early emphasis on external rotation work being done in an open packed position (i.e. scapular plane at about 45 degrees of abduction) and then progressed to positions that gradually tension the subscapularis (i.e. full adduction and then at 90 degrees of abduction and above). If subscapularis is taken down and then repaired, external rotation gains need to be progressed slower, and one should avoid aggressive external rotation stretching and internal rotation strengthening until the subscapularis is well healed. In these cases it is helpful to get a 'safe zone' of initial external rotation range of motion from the referring surgeon, as determined from intraoperative inspection from either the operative note or discussion with surgeon.) Due to the surgical technique and early immobilization required to promote healing, the subscapularis may not only be impacted in terms of length, but in terms of force production and proprioception. Hence, specific subscapularis proprioception and strengthening needs to be incorporated to enhance subscapularis function postoperatively. The clinician needs to tailor the rehabilitation program to address the unique structure of the subscapularis to enhance both the upper and lower subscapularis fibers. This is warranted due to the fact that the subscapularis is innervated by both the upper and lower subscapular nerves, along with the presence of two different muscular fiber alignments; hence, its action has been described as being like that of two different muscles depending upon the functional activity. The upper fibers are primarily aligned in a horizontal fashion and the lower fibers are arranged in more of an oblique alignment. One must therefore be selective in the rehabilitation protocol to maximally stimulate the appropriate portion of the subscapularis with the correct exercise.

Weeks 1-4

- Shoulder immobilizer at all times except shower, dressing, wrist/elbow exercises
- No active ROM of shoulder; no lifting with operative shoulder
- Start passive ROM at week 3
 - Forward flexion and elevation to tolerance

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- Abduction in the plane of the scapula to tolerance
- Internal rotation (IR) to 45 degrees at 30 degrees of abduction
- External rotation (ER) 0-25 degrees; begin at 30-40 degrees of abduction; respect anterior capsule tissue integrity with ER range of motion
- Scapular clock exercises progressed to scapular isometric exercises
- Ball squeezes
- Frequent cryotherapy for pain and inflammation
- Patient education regarding posture, joint protection, positioning, hygiene, etc.

Weeks 5-8

- Wean sling during 5th week
- Continue PROM as before; increase ER 0-45deg
- No active movement of shoulder till adequate PROM with good mechanics
- Progress to AA/AROM activities of the shoulder as tolerated with good shoulder mechanics (i.e. minimal to no scapulathoracic substitution with up to 90-110 degrees of elevation.)
- Begin incorporating posterior capsular stretching as indicated
- Cross body adduction stretch
- Side lying internal rotation stretch (sleeper stretch)
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- No lifting with affected upper extremity
- No excessive external rotation ROM / stretching
- Do not perform activities or strengthening exercises that place an excessive load on the anterior capsule of the shoulder joint (i.e. no pushups, pec flies, etc..)
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- Continued Cryotherapy for pain and inflammation
- Continued patient education: posture, joint protection, positioning, hygiene, etc.
- Begin light waist level activities

Week 9-10

- Begin rhythmic stabilization drills
- ER/IR in the scapular plane
- Flexion/extension and abduction/adduction at various angles of elevation
- Strengthen scapular retractors and upward rotators
- Initiate balanced AROM / strengthening program
 - Initially in low dynamic positions
 - Gain muscular endurance with high repetition of 30-50, low resistance 1-3 lbs)
 - Exercises should be progressive in terms of muscle demand / intensity, shoulder elevation, and stress on the anterior joint capsule
 - Nearly full elevation in the scapula plane should be achieved before beginning elevation in other planes
 - All activities should be pain free and without substitution patterns
 - Exercises should consist of both open and closed chain activities
 - No heavy lifting or plyometrics should be performed at this time
- Initiate full can scapular plane raises to 90 degrees with good mechanics
- Initiate ER/IR strengthening using exercise tubing at 0° of abduction (use towel roll)
- Initiate sidelying ER with towel roll
- Initiate manual resistance ER supine in scapular plane (light resistance)

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- Initiate prone rowing at 30/45/90 degrees of abduction to neutral arm position
- Do not perform strengthening or functional activities in a given plane until the patient has near full ROM and strength in that plane of movement
- Continued cryotherapy for pain and inflammation

Weeks 11-15

- Do not overstress the anterior capsule with aggressive overhead activities /strengthening
- Avoid contact sports/activities
- Continue A/PROM as needed/indicated
- Initiate biceps curls with light resistance, progress as tolerated
- Initiate gradually progressed strengthening for pectoralis major and minor; avoid positions that excessively stress the anterior capsule
- Progress subscapularis strengthening to focus on both upper and lower segments
 - Push up plus (wall, counter, knees on the floor, floor)
 - Cross body diagonals with resistive tubing
 - IR resistive band (0, 45, 90 degrees of abduction)
 - Forward punch

Weeks 16-20

- Continue stretching and PROM as needed/indicated
- Maintain full non-painful AROM
- Return to full strenuous work activities
- Return to full recreational activities
- Continue to avoid excessive anterior capsule stress
- With weight lifting, avoid tricep dips, wide grip bench press, and no military press or lat pulls behind the head. Be sure to “always see your elbows”
- Do not begin throwing, or overhead athletic moves until 4 months post-op or cleared by MD
- Progress isotonic strengthening if patient demonstrates no compensatory strategies, is not painful, and has no residual soreness
- Strengthening overhead if ROM and strength below 90 degree elevation is good
- Continue shoulder stretching and strengthening at least four times per week
- Progressive return to upper extremity weight lifting program emphasizing the larger, primary upper extremity muscles (deltoid, latissimus dorsi, pectoralis major)
- Start with relatively light weight and high repetitions (15-25)
- May do pushups as long as the elbows do not flex past 90 degrees
- May initiate plyometrics/interval sports program if appropriate/cleared by PT and MD
- Can begin generalized upper extremity weight lifting with low weight, and high repetitions, being sure to follow weight lifting precautions.
- May initiate pre injury level activities/ vigorous sports if appropriate / cleared by MD

Dr. Shi will perform CT scan sometimes between 4 and 6 months to determine bony union. After that point, patient can be cleared to return to contact sports.