COASTAL ORTHOPEDIC Associates

REHAB PROTOCOL FOR OPEN LATARJET PROCEDURE

PHASE I (surgery to 6 weeks after surgery)

Appointments	• Rehabilitation appointments begin 2 weeks after surgery unless instructed otherwise by surgeon
Rehabilitation Goals	• Protect the post-surgical shoulder • Activate the stabilizing muscles of the gleno-humeral and scapula-thoracic joints • 135° of active and passive range of motion (PROM) for shoulder flexion, abduction, internal rotation (IR) and external rotation (ER) to neutral

Precautions	• Sling immobilization required for soft tissue healing for 4-6 weeks. Remove sling during the 4th week in safe environments
	• Hypersensitivity in axillary nerve distribution is a common occurrence
	• Range of Motion Precautions
	  o 0-3 weeks: - No shoulder extension, abduction, IR, ER past 20° in neutral or ER with abduction. Stop flexion at first end feel or at 90° - Avoid bicep active elbow flexion due to detachment of the coracobrachialis and the short head of the biceps
	  o 4-6 weeks: - Forward elevation/flexion to 135° - IR to 50° - ER in scapular plane and 90° abduction to 30°

Suggested Therapeutic Exercise	• Begin week 4, sub-maximal shoulder isometrics for ER, flexion, extension, adduction and abduction. Take caution to start gradually and in neutral position. Avoid IR • PROM 0-3 weeks with guidelines above, starting active assistive range of motion (AAROM) at 4 weeks • Scapular squeezes and scapular clocks • Hand gripping

	• Elbow, forearm and wrist active ROM • Cervical spine ROM • Desensitization techniques for axillary nerve distribution • Postural exercises
Cardiovascular Exercise	• Walking, stationary bike - sling on • No swimming or treadmill • Avoid running and jumping due to the distractive forces that can occur at landing
Progression Criteria	• 5/5 IR and ER strength at 0° of shoulder abduction • Full flexion and abduction PROM

PHASE II (Usually 6 weeks after surgery, begin when Phase I criteria met)

Appointments	• Rehabilitation appointments are once every 1-2 weeks
Rehabilitation Goals	• Full shoulder active ROM in all cardinal planes • Progress shoulder ER ROM gradually to prevent overstressing the repaired anterior tissues of the shoulder • Strengthen shoulder and scapular stabilizers in protected position ○ (0° - 45° abduction) • Begin proprioceptive and dynamic neuromuscular control retraining

Precautions	• ROM Precautions
	  ○ 7-9 weeks: - Forward elevation/flexion to 155° - IR at 90 to 60° - ER in scapular plane to 60° - ER in 90 degrees abduction to 60°
	  ○ 10-12 weeks: - Progressively and gradually moving to full AROM

Suggested Therapeutic Exercise	• AAROM and active range of motion (AROM) in all cardinal planes – assessing scapular rhythm • Gentle shoulder mobilizations as needed • Rotator cuff strengthening in non-provocative positions (0° - 45° abduction)

	• Scapular strengthening and dynamic neuromuscular control • Cervical spine and scapular active range of motion • Postural exercises • Core strengthening
Cardiovascular Exercise	• Walking, stationary bike, Stairmaster • No swimming or treadmill • Avoid running and jumping until athlete has full rotator cuff strength in a neutral position due to the distractive forces that can occur at landing
Progression Criteria	• Full shoulder active ROM • Negative apprehension and impingement signs • 5/5 shoulder IR and ER strength at 45° abduction

PHASE III (Usually 12 weeks after surgery, begin when Phase II criteria met)

Appointments	• Rehabilitation appointments are once every 2-3 weeks
Rehabilitation Goals	• Full shoulder AROM in all cardinal planes with normal scapulohumeral movement • 5/5 rotator cuff strength at 90° abduction in the scapular plane • 5/5 peri-scapular strength
Precautions	• Avoid activities where there is a higher risk for falling or outside forces to be applied to the arm • No swimming, throwing or sports
Suggested Therapeutic Exercise	• Motion o Posterior glides if posterior capsule tightness is present. More aggressive ROM if limitations are still present • Strength and Stabilization o Flexion in prone, horizontal abduction in prone, full can exercises, D1 and D2 diagonals standing

	○ TheraBand/cable column/ dumbbell (light resistance/high rep) IR and ER in 90° abduction and rowing ○ Balance board in push-up position (with rhythmic stabilization), prone Swiss ball walk-outs, rapid alternating movements in supine D2 diagonal. Closed chain stabilization with narrow base of support
Cardiovascular Exercise	• Walking, biking, Stairmaster and running (if Phase II criteria has been met) • No swimming
Progression Criteria	• Patient may progress to Phase IV if they have met the above stated goals and have no apprehension or impingement sign

PHASE IV (when Phase III criteria met, usually 16-18 weeks after surgery)

Appointments	• Rehabilitation appointments are once every 3 weeks
Rehabilitation Goals	• Patient to demonstrate stability with higher velocity movements and change of direction movements • 5/5 rotator cuff strength with multiple repetition testing at 90° abduction in the scapular plane • Full multi-plane shoulder AROM
Precautions	• Progress gradually into provocative exercises by beginning with low velocity, known movement patterns
Suggested Therapeutic Exercise	• Motion ○ Posterior glides if posterior capsule tightness is present • Strength and Stabilization ○ Dumbbell and medicine ball exercises that incorporate trunk rotation and control with rotator cuff strengthening at 90° abduction. Begin working towards more functional activities by

	emphasizing core and hip strength and control with shoulder exercises ○ TheraBand/cable column/ dumbbell IR and ER in 90 abduction and rowing ○ Higher velocity strengthening and control, such as the inertial, plyometrics, rapid TheraBand drills. ○ Plyometrics should start with 2 hands below shoulder height and progress to overhead, then back to below shoulder with one hand, progressing again to overhead ○ Begin education in sport specific biomechanics with very initial program for throwing, swimming or overhead racquet sports
Cardiovascular Exercise	• Walking, biking, Stairmaster and running (if Phase III criteria has been met) • No swimming
Progression Criteria	• Patient may progress to Phase V if they have met the above stated goals and have no apprehension or impingement signs

PHASE V (when Phase IV criteria met, usually 24 weeks after surgery)

Appointments	• Rehabilitation appointments are once every 3 weeks
Rehabilitation Goals	• Patient to demonstrate stability with higher velocity movements and change of direction movements that replicate sport specific patterns (including swimming, throwing, etc) • No apprehension or instability with high velocity overhead movements • Improve core and hip strength and mobility to eliminate any compensatory stresses to the shoulder • Work capacity cardiovascular endurance for specific sport/work demands

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Precautions	• Progress gradually into sport specific movement patterns

Suggested Therapeutic Exercise	• Motion
	  ○ Posterior glides if posterior capsule tightness is present
	• Strength and Stabilization
	  ○ Dumbbell and medicine ball exercises that incorporate trunk rotation and control with rotator cuff strengthening at 90° abduction and higher velocities. Begin working towards more sport specific activities
	  ○ Initiate sport specific programs (throwing program, overhead racquet program or return to swimming program) depending on the athlete's sport
	  ○ High velocity strengthening and dynamic control, such as the inertial, plyometrics, rapid TheraBand drills

Cardiovascular Exercise	• Design to use sport/work specific energy systems
Progression Criteria	• Patient may return to sport after receiving clearance from the orthopedic surgeon and the physical therapist/athletic trainer