



Duke Sports Medicine

Laterjet Procedure Protocol

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PHASE I/Immediate Post-Operative Phase (Proliferation): Generally 0 - 6 Weeks Post-Op														
GOALS:	<ol style="list-style-type: none"> 1. Control Pain and Swelling 2. Protection of surgical repair 3. Avoid "stiff" shoulder 													
PRECAUTIONS:	<p>*NO active use of arm</p> <p>Avoid excessive ER ROM/stretching. Stop at first end feel.</p> <p>Reminder it takes 6-8 wks to form osseous union for newly reconstructed glenoid</p> <p>Biceps and Coracobrachialis attachments to the coracoid need to be protected</p>													
SLING	<p>Wear sling with custom brace at all times x6 weeks post-op, even while sleeping*</p> <p>Sleep with towel under the elbow to prevent shoulder hyperextension/wear sling</p>													
ROM	<p>Avoid gaining ROM too quickly</p> <table border="1" data-bbox="477 1703 1451 1864"> <thead> <tr> <th>PROM Guidelines:</th> <th>Flexion</th> <th>Abduction</th> <th>IR</th> <th>ER</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				PROM Guidelines:	Flexion	Abduction	IR	ER					
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	Weeks 1-3 100	To tolerance in scapular plane	45° at 30° abduction	25° in plane of scapula with arm at 30° of abduction
	Weeks 4-6 To tolerance	To tolerance in scapular plane	45°	30°
Wound Care	<p>Post-op dressing remains intact until post-op day #5 (~48 hours after surgery)</p> <p>May begin showering after post-op day #5 (no need to cover incision sites)</p> <p>Do NOT submerge shoulder in tub or pool for 4 weeks</p> <p>Suture/staple removal @ 10-14 days post-op, per Ortho/PT</p> <p>Begin scar massage after incision site sloughs/scar is formed</p>			
CRYOTHERAPY:	<p>Cold with compression (e.g. CryoCuff, ice with compression wrap)</p> <ul style="list-style-type: none"> • every hour for 15 minutes for first 24 hours, until acute inflammation is controlled • After acute inflammation is controlled: 3x per day for 15 minutes or longer as tolerated 			
REHABILITATION:	<p>Frequent use of CryoCuff and/or ice</p> <p>No active movement of shoulder till adequate PROM with good mechanics</p> <p>Avoid excessive load to the anterior capsule of the shoulder (pushups, pec flies, etc.)</p> <p>Exercise prescription is dependent upon the tissue healing process and <i>individual</i> functional readiness in <i>all</i> stages. If any concerns or complications arise regarding the progress for any patient, physical therapy will contact the orthopedic surgeon.</p>			

~1-3 weeks	<p>Modified pendulums in sling, progress to full pendulum exercises after 3-5 days</p> <p>Shoulder PROM: Do not force any painful motion.</p> <p>Hand squeezing exercises</p> <p>Elbow and wrist active motion (AROM) with shoulder in neutral position at side</p> <p>1-2 Finger shoulder isometrics: flexion, extension, abduction, IR, ER</p> <p>Scapular retraction without resistance, scapular depression into ball on table with shoulder in sling</p> <p>Cardiovascular training: stationary bike with sling</p>
~3-6 weeks	<p>Continue appropriate previous exercises</p> <p>Progress to AAROM within PROM precautions: start in supine, gradually progress to standing</p> <p>Full pendulum exercises</p> <p>Resisted elbow/wrist exercises (light dumbbell)</p> <p>Mobilizations to shoulder(grades I/II), scapula, and thoracic spine, if limited ROM</p> <p>Posterior capsule stretching: cross body or sleeper stretch</p> <p>Cardiovascular Training: walking progression program on TM</p> <p>LE strength training: Hip 4way, Leg press, calf raises, HS curls</p>
FOLLOW-UP:	<p>Supervised rehab: 1-2x per week</p> <p>Physical Therapist Re-evaluation: weekly or bimonthly</p> <p>Ortho Re-evaluation: ~2 & 6 weeks post-op</p>
CRITERIA FOR PROGRESSION:	<p>Minimal pain</p> <p>Near full passive ROM</p>

PHASE II (Remodeling): Generally 6-9 Weeks Post-Op

GOALS:	<ol style="list-style-type: none"> 1. Complete exercises without pain or difficulty 2. Pain-free ADLs 										
PRECAUTIONS:	<p>*NO pushups, heavy lifting, or other sports participation*</p> <p>*NO repetitive overhead use of shoulder*</p> <p>Respect anterior capsule tissue integrity with ER ROM and positioning</p>										
ROM	<p>PROM within tolerance: flexion >155deg, ER within 8-10deg of contralateral side at 20deg ABD, Passive ER >75deg at 90deg ABD</p> <p>AROM: >145deg Flexion</p> <table border="1" data-bbox="511 955 1463 1228"> <thead> <tr> <th data-bbox="511 955 678 1102">PROM Guidelines:</th> <th data-bbox="678 955 893 1102">Flexion</th> <th data-bbox="893 955 1096 1102">Abduction</th> <th data-bbox="1096 955 1291 1102">IR</th> <th data-bbox="1291 955 1463 1102">ER</th> </tr> </thead> <tbody> <tr> <td data-bbox="511 1102 678 1228">Weeks 6+</td> <td data-bbox="678 1102 893 1228">To tolerance in scapular plane</td> <td data-bbox="893 1102 1096 1228">To tolerance in scapular plane</td> <td data-bbox="1096 1102 1291 1228">To tolerance in various degrees of abduction</td> <td data-bbox="1291 1102 1463 1228">To tolerance in various degrees of abduction</td> </tr> </tbody> </table> <p>Progress AAROM to AROM as tolerated, ensure proper glenohumeral mechanics</p>	PROM Guidelines:	Flexion	Abduction	IR	ER	Weeks 6+	To tolerance in scapular plane	To tolerance in scapular plane	To tolerance in various degrees of abduction	To tolerance in various degrees of abduction
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SLING	Wean per Ortho/PT guidance										
REHABILITATION:	<p>Continue phase I exercises as needed</p> <p>Progress to the following exercises and increase intensity gradually when patient is ready (i.e., no increase in shoulder pain or stiffness since the previous exercise session)</p> <p>All strengthening should be done, starting with low weights, high repetitions, and in a painless ROM</p>										

<p>~6-9 weeks</p>	<p>ROM exercises: PROM: Progress forward flexion, elevation, & abduction in the plane of the scapula to tolerance; IR as tolerated, ER to tolerance; progress to multiple angles of abduction once >35deg at 0-40deg of ABD,</p> <p>AAROM-supine wand, seated/standing pulley and AROM</p> <p>Mobilizations to shoulder(I-IV), scapula, and thoracic spine, as needed</p> <p>Progressive Strengthening: high reps with low resistance</p> <ul style="list-style-type: none"> • ER and IR with arm in 30deg abduction, sidelying ER with towel roll • Flexion and scaption 60-90° • Prone rows at 30°, 45°, 90° Abduction <p>Scapular Stabilization: Retractions in sitting and prone, ball on wall, scapular depression into theraball, quadruped weight shifts</p> <p>Rhythmic Stabilization: ER/IR in the scapular plane, flexion/extension, ABD/ADD</p> <p>Standing Rows with TB</p> <p>UBE- forwards/backwards at low resistance</p> <p>Aerobic Conditioning: Bike, elliptical, stairmaster as desired</p> <p>Pool walking/running- NO UE resistive exercises</p>
<p>FOLLOW-UP:</p>	<p>Supervised rehab: 2-3x per week</p> <p>Physical Therapist Re-evaluation: monthly</p> <p>Ortho Re-evaluation: ~12 weeks post-op</p>
<p>TESTING:</p>	<p>Timed Functional Arm and Shoulder Test –once full IR/ ER ROM⁷</p>

PHASE III (Strengthening): Generally 4-6 months post-op

GOALS:	<ol style="list-style-type: none">1. Normalize strength, endurance, neuromuscular control2. Return to chest level functional activities3. Gradual stress to anterior joint capsule
PRECAUTIONS:	No participation in contact/collision sports or military schools until ~9 months post-op Do not avoid overly stressing the anterior capsule with aggressive overhead activities
REHABILITATION:	Continue Phase II exercises as needed Progress to the following exercises and increase intensity gradually when patient is ready (i.e., no increase in shoulder pain or stiffness since the previous exercise session) All strengthening should be done, starting with low weights, high repetitions, and in a painless ROM
<i>~10-15 weeks</i>	Continue AROM and PROM as needed Initiate biceps curls with light resistance Gradually strengthen pec major and minor-avoid excessive stress on anterior capsule Progress subscapularis strengthening with focus on both upper & lower segments <ul style="list-style-type: none">• Push up plus (wall, counter, knees on floor, floor)• Cross body diagonals with tubing• IR resistive band at 0, 45, 90deg ABD• Forward Punch Progress scapular strengthening
FOLLOW-UP:	Supervised rehab: 1-2x per week Physical Therapist Re-evaluation: monthly Ortho Re-evaluation: ~6 months post-op

TESTING:	<p>Upper quarter Y-balance test ⁶</p> <p><i>Timed Functional Arm and Shoulder Test⁷</i></p> <p><i>CKCUE Strength Test^{8,9} – once able to sustain a tall plank position without increase in pain</i></p>
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PHASE IV (Overhead Activities/Return to Activity): Generally weeks 16-20 post-op	
GOALS:	<ol style="list-style-type: none"> 1. Continue stretching and PROM as needed 2. Maintain full, non-painful AROM 3. Return to more strenuous work/recreational activities
PRECAUTIONS:	<p>No participation in contact/collision sports or military schools until ~9 months post-op</p> <p>Do not overly stress anterior capsule with aggressive overhead activities</p> <p>Avoid triceps dips, wide grip bench press, and no military press or lat pulls behind the head</p> <p>Do not begin throwing until cleared by PT/MD, usually not approved until after 4 months post-operatively</p>
REHABILITATION:	<p>Continue Phase III exercises as needed</p> <p>Progress to the following exercises and increase intensity gradually when patient is ready (i.e., no increase in shoulder pain or stiffness since the previous exercise session)</p> <p>All strengthening should be done, starting with low weights, high repetitions, and in a painless ROM</p>
~16-20 weeks	<p>Isotonic strengthening if no compensatory strategies or pain</p> <p>Strengthen at least 4x/wk</p> <p>Strengthen overhead when ROM and strength below 90° is good</p>

	<p>Progressive return to UE weight lifting emphasizing deltoid, latissimus dorsi, pectoralis major (15-25 reps, light weight)</p> <p>Push-ups without elbow flexion past 90deg</p> <p>Plyometrics if cleared by PT/MD</p> <p>Initiate return to sport training activities as cleared by MD</p>
FOLLOW-UP:	<p>Supervised rehab: 1-2x per week</p> <p>Physical Therapist Re-evaluation: monthly</p> <p>Ortho Re-evaluation:~6 months post-op</p>
TESTING:	<p><i>Timed Functional Arm and Shoulder Test⁷</i></p> <p><i>CKCUE Strength Test^{8,9}– must be able to sustain a tall plank position without increased pain prior to completing test</i></p> <p>Unilateral Shot put test⁵</p> <p style="padding-left: 40px;">Performed with 6 pound medicine ball, seated against wall, knees flexed to 90</p> <p style="padding-left: 40px;">Goal: Dominant arm limb symmetry \geq 95%</p> <p style="padding-left: 40px;">Non-dominant arm limb symmetry \geq 85%</p> <p>Upper quarter Y-balance test ⁶</p> <p style="padding-left: 40px;">Pushup position, feet no greater than 12 inches apart</p> <p style="padding-left: 40px;">Goal: \geq 90% limb symmetry, calculated by composite reach score</p>
MISCELLANEOUS:	<p>After 6-9 months post-op: Exercises in phase IV are continued, gradually increasing intensity & duration as tolerated.</p> <p>The recommendation is to wait until 9-12 months post-op to return to contact/collision sports or aggressive military training (i.e., airborne school). This time period may be adjusted slightly by the surgeon and therapist according to patient progress.</p>

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