



*Orthopedic Surgery, Sports Medicine & Arthroscopy Specialists*

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### **REHABILITATION PROTOCOL- Latarjet**

The rehabilitation guidelines are presented in a criterion based progression program. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, associated injuries, pre-injury health status, rehab compliance, tissue quality and injury severity. Specific time frames, restrictions, and precautions may also be given to protect healing tissues and the surgical repair/reconstruction. It should not be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam findings, individual progress, and/or the presence of post-operative complications. The therapist should consult the referring physician with any questions or concerns.

Special attention must be given to impairments that caused the initial problem. For example, if the patient is s/p partial medial meniscectomy and they have a varus alignment, post-operative rehabilitation should include correcting muscle imbalances or postures that create medial compartment stress.

### **INDIVIDUAL CONSIDERATIONS: S/p**

#### **PHASE 1- Surgery to 3 weeks**

REHAB GOALS	<ol style="list-style-type: none"><li>1. Protection of the post-surgical repair</li><li>2. Emphasize importance of sling usage</li><li>3. Minimize swelling &amp; pain</li></ol>
PRECAUTIONS	<ol style="list-style-type: none"><li>1. Sling immobilization for 6 weeks, use at all times except bathing &amp; ROM exercises</li><li>2. ROM precautions: 100 flexion, 15 ER at 30 abduction. no active internal rotation. Week 3 can increase ER to 30 at 45 abduction</li><li>3. Cryocuff 3-5 times per day for 20 minutes and ice after every therapy session once splint removed</li><li>4. No lifting or carrying objects</li></ol>
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"><li>○ Active &amp; passive wrist, hand ROM, ball squeeze, gripping</li><li>○ Supported Codman exercises</li><li>○ No stretching at this time</li></ul>
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"><li>○ As above</li><li>○ Week 2- LE and core strengthening with sling on at all times</li></ul>
CARDIOVASCULAR EXERCISE	None

PROGRESSION CRITERIA	<ul style="list-style-type: none"> <li>○ Minimal/no pain</li> <li>○ 100% sling compliance</li> <li>○ No signs of repair failure</li> <li>○ Wound healing</li> </ul>
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## PHASE 2- 4-6weeks

REHAB GOALS	<ol style="list-style-type: none"> <li>1. Protection of the post-surgical repair</li> <li>2. Prevent contracture of hand/wrist/elbow</li> <li>3. Minimize pain and swelling</li> </ol>
PRECAUTIONS	<ol style="list-style-type: none"> <li>1. Sling immobilization for 6 weeks, use at all times except bathing &amp; ROM exercises</li> <li>2. ROM precautions: no limit scaption/flexion, 45 ER at 45 abduction, 45 IR in 30 abduction. no active internal rotation.</li> <li>3. No active range of motion for 6 weeks</li> <li>4. Cryocuff 3-5 times per day for 20 minutes and ice after every therapy session once splint removed</li> <li>5. No lifting or carrying objects.</li> </ol>
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> <li>○ Continue phase 1 exercises- no active ROM</li> <li>○ ROM restrictions: as above.</li> <li>○ Glenohumeral/scapular mobilizations as needed in 30 deg scapular elevation, neutral rotation</li> </ul>
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> <li>○ Continue phase 1 exercises</li> <li>○ Core &amp; hip isometrics</li> <li>○ Higher level athletes may begin single LE balance with head movements, functional 1/3 squats, step ups/downs and stationary lunges</li> </ul>
CARDIOVASCULAR EXERCISE	Stationary bike at week 3 while wearing sling at all times
PROGRESSION CRITERIA	<ul style="list-style-type: none"> <li>○ No swelling or pain. No signs/symptoms of instability</li> <li>○ Elbow, wrist &amp; hand ROM equal to contralateral</li> <li>○ PROM per ROM guidelines</li> </ul>

## PHASE 3- 7-10 weeks postop

REHAB GOALS	<ul style="list-style-type: none"> <li>○ Protect surgical repair</li> <li>○ Gradual restoration of ROM</li> <li>○ Improve scapular, cuff strength</li> <li>○ Normalize trunk &amp; kinetic chain</li> </ul>
PRECAUTIONS	<ul style="list-style-type: none"> <li>○ ROM limitations- Weeks 7 &amp; 8: ER at 90 abduction 45 degrees, ER at side &lt;50. Weeks 9-11: ER at 90 abduction 75 , ER at side &lt;65. Week 12 no ROM limitations</li> </ul>

	<ul style="list-style-type: none"> <li>○ Discontinue sling use</li> <li>○ Recommend full active forward elevation before progressing to elevation in other planes or resistive elevation</li> </ul>
<b>RANGE OF MOTION EXERCISES</b>	<ul style="list-style-type: none"> <li>○ Continue exercises from phase 2.</li> <li>○ Mobilizations as needed (esp ant/inf glides)</li> <li>○ Pec minor &amp; sleeper stretches. Lat/forward elevation stretches as needed</li> <li>○ ROM limitations as above</li> <li>○ Progress ROM from passive to active assist to active</li> </ul>
<b>SUGGESTED THERAPEUTIC EXERCISES</b>	<ul style="list-style-type: none"> <li>○ Continue exercises from phase 2</li> <li>○ LE - progress strengthening. No power clean/dead lift/back squats</li> <li>○ IR isometrics, gentle PREs of biceps, triceps, deltoid, middle/lower trap and ER.</li> <li>○ Side lying ER no resistance</li> <li>○ Isometric ER/IR/flexion/extension/abduction. Progress to light resistance bands in neutral week 8.</li> <li>○ Hand on baps board in partial UE wt bearing, progress to body blade at side in neutral week 8</li> <li>○ Scapular clocks. Seated small arc scapular depression, seated scapular retraction</li> <li>○ Scapular PNF sidelying, IR/ER PNF repeated contractions in neutral, Glenohumeral PNF supine, rhythmic stabilization progress to slow reversals, elbow PNF.</li> <li>○ Week 8- wall protraction with bilateral UE, progress to one arm. Scapular depression &amp; rows w/light resistance.</li> <li>○ Week 8-Prone I scapular three step exercises</li> <li>○ Plyometrics- LE low impact at week 8 for high level athletes</li> <li>○ Functional- Lawnmowers, Romanian dead lifts, thoracic spine &amp; trunk mobility</li> </ul>
<b>CARDIOVASCULAR EXERCISE</b>	Stationary bike increasing resistance Week 9-stairmaster, advance to elliptical (no upper body) UBE as tolerated, aqua therapy as needed
<b>PROGRESSION CRITERIA</b>	<ul style="list-style-type: none"> <li>○ Achievement of ROM goals</li> <li>○ No pain/swelling/instability</li> <li>○ Normal glenohumeral &amp; scapulothoracic mechanics</li> </ul>

### **PHASE 4- 11-14 weeks postop**

<b>REHAB GOALS</b>	<ul style="list-style-type: none"> <li>○ Full ROM in all planes</li> <li>○ 85% strength of contralateral</li> <li>○ Improvement of strength, endurance, neuromuscular control</li> </ul>
<b>PRECAUTIONS</b>	Post-activity soreness should resolve within 24 hours Avoid post activity swelling No ROM limitations at week 12

<b>RANGE OF MOTION EXERCISES</b>	<ul style="list-style-type: none"> <li>○ Continue with flexibility exercises from previous phase</li> <li>○ Gentle end range stretching</li> <li>○ LE and core flexibility</li> <li>○ Mobilizations as needed</li> </ul>
<b>SUGGESTED THERAPEUTIC EXERCISES</b>	<ul style="list-style-type: none"> <li>○ Continue phase 3 activities. Progress with resistance/load.</li> <li>○ Bent over low row with light weight, progress to low and mid row</li> <li>○ Non throwers- full can to 90 deg</li> <li>○ Shoulder flexion/abduction to 90 with light weight</li> <li>○ Bicep curls (supported)</li> <li>○ Increase UE wt bearing on unstable surface, progress UE resistance bands w/unstable surface, unilateral, etc</li> <li>○ Prone T and Y, wall pushup progression. Body blade varying angles</li> <li>○ 16 weeks: thrower's exercises: ER/IR at 0 abduction (progress to IR/ER at 20 weeks), scaption ER full can, rows into ER at 90 abduction seated on stability ball, lower trap seated on stability ball, elbow flexion, elbow extension/triceps, wrist extension, wrist flexion, supination, pronation, sleeper stretch, supine horizontal adduction stretch into IR, Prone horizontal abduction neutral/full ER at 100, prone row, Diagonal pattern (D2) flexion/extension</li> <li>○ Balance/proprioception- progress to unstable surface, perturbations, etc</li> <li>○ Plyometrics- progress LE drills.</li> </ul>
<b>CARDIOVASCULAR EXERCISE</b>	Continue from phase 3, add upper body ergometer if needed. Walk/jog progression at week 12
<b>PROGRESSION CRITERIA</b>	<ul style="list-style-type: none"> <li>○ Normal kinematics of GH &amp; ST joints</li> <li>○ Full painless active &amp; passive ROM</li> <li>○ Strength 85% contralateral</li> </ul>

### PHASE 5- 15-24 weeks

<b>REHAB GOALS</b>	<ul style="list-style-type: none"> <li>○ Continue strengthening</li> <li>○ Full pain free ROM</li> <li>○ Good core &amp; LE strength &amp; stability</li> <li>○ 85% strength of contralateral</li> </ul>
<b>PRECAUTIONS</b>	<ul style="list-style-type: none"> <li>○ Post-activity soreness should resolve within 24 hours</li> <li>○ Caution with progression if inadequate core stability/scapulothoracic control/rotator cuff strength present</li> </ul>
<b>RANGE OF MOTION EXERCISES</b>	<ul style="list-style-type: none"> <li>○ Continue with flexibility exercises</li> </ul>
<b>SUGGESTED</b>	<ul style="list-style-type: none"> <li>○ Progress strengthening from phase 4</li> <li>○ Core- plank progression</li> </ul>

<b>THERAPEUTIC EXERCISES</b>	<ul style="list-style-type: none"> <li>○ UE- cables, lat pulls, seated rows, gentle seated chest press from mid range</li> <li>○ thrower's exercises: ER/IR at 0 abduction (progress to IR/ER at 90 if no pain), scaption ER full can, rows into ER at 90 abduction seated on stability ball, lower trap seated on stability ball, elbow flexion, elbow extension/triceps, wrist extension, wrist flexion, supination, pronation, sleeper stretch, supine horizontal adduction stretch into IR, Prone horizontal abduction neutral/full ER at 100, prone row, Diagonal pattern (D2) flexion/extension</li> <li>○ Protraction progression- unilateral at wall, b/l at table, b/l half kneeling unstable surface</li> <li>○ Week 20- Overhead athletes- interval throwing program once strength &amp; ROM goals of this phase achieved</li> <li>○ Plyometrics- ok to begin UE. Start with two hand, minimal/no weighted ball</li> <li>○ Week 18- Limited sport specific overhead work for swimming, tennis, volleyball</li> </ul>
<b>CARDIOVASCULAR EXERCISE</b>	<ul style="list-style-type: none"> <li>○ Continue to progress from phase 4. Initiate jog/run progression.</li> </ul>
<b>PROGRESSION CRITERIA</b>	<ul style="list-style-type: none"> <li>○ At least 85% strength of contralateral (at least 70% rotator cuff ratio)</li> <li>○ No pain or limitation with initiation of throwing (overhead athletes) or other overhead program</li> <li>○ No instability</li> </ul>

## PHASE 6- 25+ weeks

<b>REHAB GOALS</b>	Return to sport
<b>PRECAUTIONS</b>	Post-activity soreness should resolve within 24 hours
<b>RANGE OF MOTION EXERCISES</b>	Continue with flexibility exercises
<b>SUGGESTED THERAPEUTIC EXERCISES</b>	<ul style="list-style-type: none"> <li>○ Progress strengthening from phase 4. Ok to do Olympic/power lifts.</li> <li>○ Plyometrics: continue to progress difficulty for both UE and LE plyometric activities.</li> <li>○ Ok to begin sport specific overhead work for swimming, tennis, volleyball</li> </ul>

	<ul style="list-style-type: none"><li>○ Overhead athletes- Interval throwing program- progress to phase 2 if phase 1 complete</li><li>○ Football, wrestling- ok to begin sport specific activities</li></ul>
<b>CARDIOVASCULAR EXERCISE</b>	<ul style="list-style-type: none"><li>○ Jog/run progression. Begin sprinting when able to run 2 miles without pain.</li></ul>
<b>PROGRESSION CRITERIA- RETURN TO SPORT</b>	<ul style="list-style-type: none"><li>○ Pain free, full ROM, uncompensated under fast &amp; resisted conditions</li><li>○ 90% strength of contralateral side rotator cuff &amp; scapular (at least 70% rotator cuff ratio).</li><li>○ Completion of throwing program/sport specific program</li><li>○ At least 90% functional closed kinetic chain tests</li><li>○ Overhead athletes with normal mechanics/form and no pain post activity</li><li>○ Return to sport likely 8-9 months for overhead athletes</li></ul>