



*Orthopedic Surgery, Sports Medicine & Arthroscopy Specialists*

## Jonathan Watson, MD

### REHABILITATION PROTOCOL- Nonoperative LCL/PLC tear

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- (~0-6 weeks)**

REHAB GOALS	<ol style="list-style-type: none"> <li>1. Protection of the Ligament</li> <li>2. Restore leg control – no lag with straight-leg-raise</li> <li>3. Eliminate effusion/swelling</li> <li>4. Gait training and mobility</li> </ol>
PRECAUTIONS	<ol style="list-style-type: none"> <li>1. Hinged knee brace, locked at 0 for ambulation with crutches for 4 weeks</li> <li>2. Cryocuff 3-5 times per day for 20 minutes and ice after every therapy session</li> </ol>
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> <li>○ Gentle stretching for calf, hamstring</li> </ul>
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> <li>○ Ankle, hip, core strengthening.</li> <li>○ 3 way SLR- Avoid hip abduction</li> <li>○ Weight shifts</li> <li>○ Balance- single leg stance</li> </ul>
CARDIOVASCULAR EXERCISE	Upper body circuit training or UBE
PROGRESSION CRITERIA	<ul style="list-style-type: none"> <li>○ Minimal pain &amp; swelling</li> <li>○ Good quad set, able to perform SLR without lag</li> </ul>

	<ul style="list-style-type: none"> <li>○ At least 120 deg of knee flexion</li> <li>○ Normal gait without assistive device</li> <li>○ No instability</li> </ul>
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**PHASE 2- (~6-10 weeks)**

<b>REHAB GOALS</b>	<ol style="list-style-type: none"> <li>1. Protection of the healing ligament</li> <li>2. Restore full ROM</li> <li>3. Regain quadriceps control</li> <li>4. Minimize pain and swelling</li> <li>5. Restore normal gait</li> </ol>
<b>PRECAUTIONS</b>	<ol style="list-style-type: none"> <li>1. Continue brace, unlock for ROM</li> <li>2. Continue ice post activity</li> <li>3. No isolated hamstring strengthening for 6 weeks</li> </ol>
<b>RANGE OF MOTION EXERCISES</b>	<ul style="list-style-type: none"> <li>○ Continue phase 1 exercises</li> </ul>
<b>SUGGESTED THERAPEUTIC EXERCISES</b>	<ul style="list-style-type: none"> <li>○ Continue phase 1 exercises, progress with weight/resistance</li> <li>○ LE- leg press (0-80), knee extension (60-0), hip machine, hip ER/IR, wall squats (0-60), sidelying clams, lateral step downs, monster walks (resistance proximal to knee), eccentric quad strengthening</li> <li>○ Balance- add unstable, perturbations, etc</li> </ul>
<b>CARDIOVASCULAR EXERCISE</b>	Stationary bike, pool jogging
<b>PROGRESSION CRITERIA</b>	<ul style="list-style-type: none"> <li>○ Full pain free ROM</li> <li>○ No instability</li> <li>○ At least 4/5 strength LE</li> </ul>

**PHASE 3- (~10-16 weeks)**

<b>REHAB GOALS</b>	<ul style="list-style-type: none"> <li>○ Maintain/restore full ROM</li> <li>○ Improve quad strength &amp; endurance</li> <li>○ Improve hip &amp; core strength, balance, stability</li> </ul>
<b>PRECAUTIONS</b>	<ul style="list-style-type: none"> <li>○ Continue brace for activity</li> <li>○ Continue ice after PT</li> <li>○ Avoid post activity swelling</li> </ul>
<b>RANGE OF MOTION EXERCISES</b>	<ul style="list-style-type: none"> <li>○ Continue exercises from phase 2.</li> <li>○ Soft tissue mobilizations as needed</li> <li>○ Sport specific flexibility exercises</li> </ul>

SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> <li>○ Continue phase 2 exercises</li> <li>○ LE- forward &amp; lateral lunges, sports cord exercises, BOSU squats</li> <li>○ Week 13- light plyometrics on leg press, two legged hops in place, progress to forward/backward</li> </ul>
CARDIOVASCULAR EXERCISE	<p>Continue phase 2 Elliptical, swimming</p> <p>Week 13- progress to walk/run progression if no pain or instability with activities</p>
PROGRESSION CRITERIA	<ul style="list-style-type: none"> <li>○ Full active ROM</li> <li>○ No instability or effusion</li> <li>○ At least 85% strength</li> </ul>

**PHASE 4- (~16+ weeks)**

REHAB GOALS	<ul style="list-style-type: none"> <li>○ Restore/maintain full ROM</li> <li>○ Improve strength</li> <li>○ Continue neuromuscular progression</li> <li>○ Return to sport/work</li> </ul>
PRECAUTIONS	<p>Consider brace for sporting activity</p> <p>Post-activity soreness should resolve within 24 hours</p> <p>Avoid post activity swelling</p> <p>Continue ice after PT</p>
RANGE OF MOTION EXERCISES	<p>Continue with flexibility exercises</p> <p>PNF stretches</p>
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> <li>○ Progress phase 3 activities with resistance/weight</li> <li>○ Balance/neuromuscular- continue progression with unstable surface, perturbations, etc</li> <li>○ Continue open and closed chain exercises, progress with weight/resistance</li> <li>○ Continue plyometric progression</li> <li>○ Agility- lateral cariocas, figure 8s, shuttle runs</li> <li>○ Non contact sport specific drills/activities</li> </ul>
CARDIOVASCULAR EXERCISE	<p>Continue previous phase exercises, progress to baseline</p>
PROGRESSION CRITERIA- RETURN TO SPORT	<ul style="list-style-type: none"> <li>○ Full, painless active and passive ROM</li> <li>○ &gt;90% quad &amp; hamstring strength of contralateral</li> <li>○ No instability/apprehension</li> <li>○ Completion of sport/work specific program</li> <li>○ Pass return to sport test</li> </ul>

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|  | <ul style="list-style-type: none"><li>○ Clearance by physician</li></ul> |
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**RETURN TO SPORT TEST**

- 10 rep max single leg squat with external weight
- Single broad jump landing on one foot
- Triple broad jump landing on one foot
- Single leg forward hop
- Single leg crossover hop
- Single leg medial and lateral hop
- Single leg medial and lateral rotating hop
- Single leg vertical hop
- Single leg triple hop
- Timed 6 meter hop
- 10 yard lower extremity functional test
- 10 yard pro agility run