

## REHABILITATION GUIDELINES FOR PCL RECONSTRUCTION

### PHASE I (0-6 WEEKS)

DATES:

Appointments	<p>MD appointment week 1</p> <p>Begin physical therapy 3 days post op</p>
Rehabilitation Goals	<ul style="list-style-type: none"> <li>• Protect healing bony and soft tissue structures.</li> <li>• Minimize the effects of immobilization: decrease swelling, promote quad strength, avoid blood pooling in veins,</li> <li>• Early protected range of motion (protect against posterior tibial sagging).</li> <li>• Strength progression of quadriceps, hip, and calf with an emphasis on limiting patellofemoral joint compression and posterior tibial translation.</li> <li>• Patient education for a clear understanding of limitations and expectations of the rehabilitation process, and need for supporting proximal tibia/preventing sag.</li> </ul>
Precautions	<ul style="list-style-type: none"> <li>• Knee flexion 0-90 degrees x 6 weeks</li> <li>• Brace locked in extension x 2 weeks when weight bearing,</li> <li>• Brace un-locked 2-6 weeks for gait in controlled setting at home or in PT</li> <li>• No open chain hamstring work x 6 weeks</li> <li>• PCL with posterolateral corner or LCL repair TTWB x 6 weeks</li> <li>• Brace on at all times even when sleeping x 6 weeks</li> </ul>
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> <li>• Quad sets, patellar mobs, heel slides</li> <li>• gastrocnemius/soleus stretch</li> <li>• SLR w/ brace in full extension until quad strength prevents extension lag</li> <li>• Side-lying hip/core: hip abduction</li> <li>• Ankle Pumps</li> <li>• Focus on prone based exercises</li> <li>• Hamstrings avoidance x 6 weeks post-op</li> </ul>
Progression Criteria	<ul style="list-style-type: none"> <li>• Criteria for progression to Phase II:</li> <li>• Good quadriceps control (good quad set, no lag with SLR).</li> <li>• 90 degrees knee flexion.</li> <li>• Full knee extension.</li> <li>• No signs of active inflammation</li> </ul>

PHASE II (6-12 WEEKS)

DATES:

Appointments	Continue physical therapy (2-3x/week)
Rehabilitation Goals	<ul style="list-style-type: none"> <li>• Increase ROM (particularly flexion).</li> <li>• Normalize gait with crutches</li> <li>• Continue to improve quadriceps strength and hamstring flexibility.</li> </ul>
Precautions	<ul style="list-style-type: none"> <li>• 6-8 weeks: Brace unlocked for all activities.</li> <li>• 8 weeks: Brace discontinued, as allowed by surgeon.</li> <li>• Note, if PCL or LCL repair, continue brace until cleared by surgeon.</li> <li>• No squats &gt; 90 degrees</li> </ul>
Suggested Therapeutic Exercises	<p>6-8 weeks</p> <ul style="list-style-type: none"> <li>• Wall slides/mini-squats (0-45 degrees).</li> <li>• Leg press (0-60 degrees).</li> <li>• Standing 4-way hip exercise for flexion, extension, abduction, adduction (from neutral, knee fully extended).</li> </ul> <p>8-12 weeks</p> <ul style="list-style-type: none"> <li>• Stationary bike</li> <li>• Closed kinetic chain terminal knee extension using resisted band or weight machine. Note: important to place point of resistance to minimize tibial displacement.</li> <li>• Balance and proprioception exercises.</li> <li>• Seated calf raises.</li> <li>• Leg press and squats (0-90 degrees).</li> </ul>
Cardiovascular Exercises	<p>8-12 weeks</p> <ul style="list-style-type: none"> <li>• Stairmaster.</li> <li>• Elliptical trainer</li> <li>• Stationary bike</li> </ul>
Progression Criteria	<ul style="list-style-type: none"> <li>• Full, pain free ROM. (Note: it is not unusual for flexion to be lacking 10-15 degrees for up to 5 months post-op.)</li> <li>• Normal gait without brace or crutches.</li> <li>• Good to normal quadriceps control.</li> <li>• No patellofemoral complaints.</li> <li>• Clearance by surgeon to begin more concentrated closed kinetic chain progression.</li> </ul>

PHASE III (12-16 WEEKS)

DATES:

Appointments	Continue physical therapy (2-3x/week)
Rehabilitation Goals	<ul style="list-style-type: none"> <li>• Restore any residual loss of motion that may prevent functional progression.</li> <li>• Progress functionally and prevent patellofemoral irritation.</li> <li>• Improve functional strength and proprioception using close kinetic chain exercises. Continue to maintain quadriceps strength and hamstring flexibility</li> <li>• Normal gait without brace or crutches</li> </ul>
Precautions	<ul style="list-style-type: none"> <li>• Sports Brace</li> </ul>
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> <li>• Advance closed chain strengthening-Leg press limited to 0-90 degrees, Hip machine.</li> <li>• Progress proprioception activities</li> <li>• Jogging in pool</li> <li>• Hamstring curls in standing to 45 degrees</li> </ul>
Progression Criteria	<ul style="list-style-type: none"> <li>• Clearance by surgeon to resume full or modified/partial activity (i.e. return to work, recreational, or athletic activity)</li> <li>• No significant patellofemoral or soft tissue irritation.</li> <li>• Presence of necessary joint ROM, muscle strength and endurance, and proprioception to safely return to athletic participation.</li> <li>• Full, pain free ROM.</li> <li>• Satisfactory clinical examination.</li> <li>• Quadriceps strength 85% of uninvolved leg.</li> <li>• Functional testing 85% of uninvolved leg.</li> </ul> <p>No change in laxity testing.</p>

PHASE IV (16-24 WEEKS)

DATES:

Appointments	Continue physical therapy (Independent Gym or 1x/month)
Rehabilitation Goals	<ul style="list-style-type: none"> <li>• Safe and gradual return to work or athletic participation.</li> <li>• This may involve sport-specific training, work hardening, or job restructuring as needed.</li> <li>• Patient demonstrates a clear understanding of their possible limitations.</li> <li>• Maintenance of strength, endurance, and function.</li> </ul>
Precautions	<ul style="list-style-type: none"> <li>• Sports Brace</li> </ul>
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> <li>• 16 wks: Begin jumping</li> <li>• 20 wks: Advance to sprinting</li> </ul>



	<ul style="list-style-type: none"><li>• Backward running, cutting/pivoting/changing direction</li><li>• Leg press and hamstring curl machine, wall slides, Roman Chair, step ups, squats</li><li>• Initiate plyometric program and sport-specific drills</li><li>• Work hardening program as indicated by physical therapist and/or surgeon recommendation. Patient will need a referral from surgeon to begin work hardening.</li></ul>
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References: Brotzman SB, Wilk KE, Clinical Orthopaedic Rehabilitation. Philadelphia, PA: Mosby Inc; 2003: 300-302.

# Sports Medicine



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