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**PCL Injury Non-Surgical Rehabilitation Protocol**

Phase / Goals	Immobilization	ROM	Therapeutic Exercises
<b>Phase 1 (0-2 weeks)</b> Goals: <ul style="list-style-type: none"> <li>• ROM 0-90°</li> <li>• Protect posterior tib sag</li> <li>• No quad lag</li> </ul>	<ul style="list-style-type: none"> <li>• PCL brace at all times including sleep</li> <li>• 20lb flat foot weight bearing in brace x 2 weeks</li> </ul>	<ul style="list-style-type: none"> <li>• PROM 0-90° – all ROM exercises performed prone or side lying x 2 weeks</li> <li>• Modalities PRN</li> </ul>	<ul style="list-style-type: none"> <li>• Home stretching 2-3x daily</li> <li>• Flexion/extension seated/calf assisted</li> <li>• Quad sets, SLR</li> <li>• Ankle pumps</li> <li>• No hamstring isometrics x6 weeks</li> </ul>
<b>Phase 2 (3-4 weeks)</b> Goals: <ul style="list-style-type: none"> <li>• Control effusion</li> <li>• Full PROM</li> <li>• Full weight bearing</li> </ul>	<ul style="list-style-type: none"> <li>• PCL brace at all times including sleep</li> <li>• Advance to full weight bearing</li> </ul>	<ul style="list-style-type: none"> <li>• Full PROM, begin AAROM               <ul style="list-style-type: none"> <li>◦ Avoid hyperextension x 12 weeks</li> </ul> </li> <li>• Modalities PRN               <ul style="list-style-type: none"> <li>◦ Begin BFR</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Closed chain strengthening 0-45°</li> <li>• Quad sets/SLR in Brace at 0° (assist patient with this exercise until solid quad contraction developed, prevent posterior sag) 3x10 3x's/daily, may use ankle weights as they will increase anterior translation</li> <li>• Begin stationary bike w/ no resistance once ROM 0-120°</li> <li>• Can begin pool therapy, but NO kicking</li> </ul>
<b>Phase 3 (5-6 weeks)</b> Goals: <ul style="list-style-type: none"> <li>• FWB</li> <li>• Full ROM</li> <li>• 4+/5 quad strength</li> </ul>	<ul style="list-style-type: none"> <li>• FWB</li> <li>• PCL brace at all times including sleep</li> </ul>	<ul style="list-style-type: none"> <li>• Progress to full A/PROM               <ul style="list-style-type: none"> <li>◦ Avoid hyperextension x 12 weeks</li> </ul> </li> <li>• Patellar mobilization</li> <li>• Modalities PRN</li> </ul>	<ul style="list-style-type: none"> <li>• ¼ squats, leg press 0-60° light weight</li> <li>• Gentle sit and reach for hamstrings (no hypertext)</li> <li>• Start proprioception training in brace</li> <li>• Stationary bike with minimal resistance</li> <li>• Single leg stance</li> </ul>

<b>Phase 4 (7-8 weeks)</b> Goals: <ul style="list-style-type: none"> <li>FWB</li> </ul>	<ul style="list-style-type: none"> <li>FWB</li> <li>PCL Brace full time</li> </ul>	<ul style="list-style-type: none"> <li>Full A/PROM <ul style="list-style-type: none"> <li>Avoid hyperextension x 12 weeks</li> </ul> </li> <li>Patellar mobilization</li> </ul>	<ul style="list-style-type: none"> <li>Light RDL/sliders</li> <li>Leg press 0-90° light weight</li> <li>Squat progression</li> <li>Stationary bike advance resistance</li> <li>Progress from bilat leg press to unilateral w/ light weight</li> </ul>
<b>Phase 5 (9-12 weeks)</b> Goals: <ul style="list-style-type: none"> <li>5/5 strength</li> <li>Normal gait</li> <li>Good single leg stance</li> </ul>	<ul style="list-style-type: none"> <li>FWB</li> <li>PCL Brace full-time</li> </ul>	<ul style="list-style-type: none"> <li>Full A/PROM <ul style="list-style-type: none"> <li>Avoid hyperextension x 12 weeks</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Start plyometric/jump training</li> <li>Start long lever hamstring exercises and strengthening</li> <li>Isokinetic test for Quad strength difference <math>\leq 10\%</math> and unilateral Hamstring/Quad strength ratio of 65% or better</li> <li>Initiate early return to play exercises</li> <li>Return to running when sufficient strength and stability (&gt;90% quad strength and girth)</li> </ul>
<b>Phase 6 (13-16 weeks)</b> Goals: <ul style="list-style-type: none"> <li>Return to sport</li> </ul>	<ul style="list-style-type: none"> <li>FWB</li> <li>PCL brace during training or sport</li> </ul>	<ul style="list-style-type: none"> <li>Full A/PROM</li> </ul>	<ul style="list-style-type: none"> <li>Start resisted dominant hamstring</li> <li>Advance return to play exercises and drills</li> <li>Avoid deep loaded CKC flexion until 16 weeks</li> <li>Continue strength testing monthly until patient passes then perform functional testing</li> <li>Dr. Ridley to discuss prior to return to sport</li> </ul>
<b>Phase 7 (17-28 weeks)</b> Goals: <ul style="list-style-type: none"> <li>Full game play without instability or swelling</li> </ul>	<ul style="list-style-type: none"> <li>FWB</li> <li>PCL brace optional</li> </ul>	<ul style="list-style-type: none"> <li>Full A/PROM</li> </ul>	<ul style="list-style-type: none"> <li>Continue strength and plyometric training</li> <li>Advance game time and endurance</li> </ul>

### RETURN-TO-SPORT CRITERIA:

*Full return to all sports and games*

- Atleast 3 months from injury
- No functional complaints, full range of motion & no effusion
- Confidence when running, cutting, jumping at full speed
- >90% isometric quadriceps strength
- >90% contralateral values on hop tests
- >90% Quad Index LSI with Biodex or HHD
- >90% Quad peak torque/body weight on Biodex (if applicable)
- Excellent ACL-RSI