

## Isolated Posterior Cruciate Ligament Reconstruction Guideline

Time	Goals	Precautions/Restrictions	Treatment
<b>Weeks 0 – 6</b>	<ul style="list-style-type: none"> <li>• Reduce pain and swelling</li> <li>• Motion from 0-90°</li> <li>• Maintain patellar mobility</li> <li>• Active quadriceps control</li> </ul>	<ul style="list-style-type: none"> <li>• WBAT</li> <li>• Brace locked in extension</li> <li>• No hyperextension</li> <li>• Avoid posterior tibial translation</li> <li>• No isolated hamstring strengthening</li> <li>• Prone PROM 0-90°</li> <li>• May unlock brace weeks 4-6 at 0-90° for exercises</li> </ul> <p><i>**Defer to operative note for surgeon specific WB instructions with concurrent injuries**</i></p>	<ul style="list-style-type: none"> <li>• ROM from 0-90°               <ul style="list-style-type: none"> <li>○ No bike</li> <li>○ Flexion PROM in prone</li> </ul> </li> <li>• Quadriceps recruitment/NMES</li> <li>• Hip strengthening</li> <li>• Gait training with crutches</li> <li>• Blood flow restriction; if applicable</li> </ul>
<b>Weeks 6 - 12</b>	<ul style="list-style-type: none"> <li>• Progress ROM to 0-125°</li> <li>• Progress to WBAT</li> <li>• Progression of quadriceps strength/endurance</li> <li>• SLR without extensor lag</li> <li>• Normalized gait mechanics</li> </ul>	<ul style="list-style-type: none"> <li>• Brace unhinged with excellent quad control</li> <li>• Continue with PCL brace</li> <li>• May progress WB up to 100% by week 8</li> <li>• Avoid isolated hamstring strengthening</li> <li>• Avoid posterior pain with knee flexion motion</li> </ul>	<ul style="list-style-type: none"> <li>• Progress ROM               <ul style="list-style-type: none"> <li>○ Bike with no resistance when ROM greater than 115°</li> </ul> </li> <li>• Progress gait during crutch weaning</li> <li>• Initiate closed-chained strengthening at 0-70° (leg press, squat, hamstring bridges on ball, etc.)</li> <li>• Core stabilization exercises</li> <li>• Proprioceptive exercises</li> <li>• Optional therapies: anti-gravity treadmill</li> </ul>
<b>Weeks 12 - 18</b>	<ul style="list-style-type: none"> <li>• Full, symmetric and pain-free ROM</li> <li>• Progress quadriceps strength/endurance</li> <li>• No effusion with increased activity</li> <li>• Pass Return to Run criteria (see appendix)</li> </ul>	<ul style="list-style-type: none"> <li>• Continue with PCL brace for activities</li> <li>• Avoid isolated hamstring exercise until week 16</li> <li>• May increase closed-chain strengthening &gt; 70° at week 12</li> <li>• No running, jumping, cutting, pivoting, or twisting</li> </ul>	<ul style="list-style-type: none"> <li>• Progressive double and single limb strengthening (0-90°)</li> <li>• End range flexion and extension</li> <li>• Aerobic training on stationary bike, elliptical, stair climber, UBE</li> <li>• Progression of balance/proprioception</li> <li>• Initiate light kicking; running program if applicable</li> </ul>
<b>Months 4 - 6</b>	<ul style="list-style-type: none"> <li>• Full, symmetric ROM</li> <li>• Progress sport specific training</li> <li>• Successful progression of return to run program</li> <li>• Initiate plyometric and agility training</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid painful activities/exercises</li> <li>• No jogging on painful or swollen knee</li> <li>• No participation in sports</li> </ul>	<ul style="list-style-type: none"> <li>• Progress hypertrophy and strength training</li> <li>• Continue balance/proprioceptive training</li> <li>• Perform Return to Run testing</li> <li>• Initiate running program; if applicable</li> <li>• Increase intensity of plyometric and agility training</li> </ul>
<b>Months 6 – 9</b>	<ul style="list-style-type: none"> <li>• Continue to progress functional strengthening</li> <li>• Sport-specific training</li> <li>• Pass Return to Sport criteria</li> </ul>	<ul style="list-style-type: none"> <li>• No participation in sports unless specified by care team</li> <li>• Avoid painful activities</li> </ul>	<ul style="list-style-type: none"> <li>• Continue PRE with strength, power, velocity focus</li> <li>• Progress plyometrics and agility</li> <li>• Begin sport-specific training</li> <li>• Gradual RTS progression if criteria passed</li> </ul>

This guideline is not meant to be prescriptive but a recommendation to the rehabilitation process. Progress may vary based on specifics of injury and procedure.



## Posterior Cruciate Ligament Reconstruction Functional Assessment

Phase	Criteria	Testing
<b>Weeks 18-22</b>  <b>Must meet criteria prior to running</b>	<ul style="list-style-type: none"> <li>• Full, symmetric ROM</li> <li>• Y-balance anterior reach asymmetry &lt; 5 cm</li> <li>• Quadriceps strength for isometric test &gt; 80% of uninvolved side</li> <li>• Hip abduction strength for isometric test &gt; 80% of uninvolved side</li> </ul>	<ul style="list-style-type: none"> <li>• Knee assessment including assessment for effusion</li> <li>• Passive and active ROM</li> <li>• Y-balance anterior reach</li> <li>• Isometric knee extension at 60° and 90° with handheld dynamometer (HHD)</li> <li>• Isometric hip abduction at neutral with HHD</li> <li>• Single leg isometric squat at 60° on 3PQ</li> <li>• Forward step-down assessment</li> <li>• FOTO, IKDC</li> </ul>
<b>Month 6</b>	<ul style="list-style-type: none"> <li>• Full, symmetric ROM</li> <li>• 100% limb symmetry (LSI) for isometric testing</li> <li>• 100% LSI for functional testing</li> <li>• ACL-RSI &gt; 56</li> </ul>	<ul style="list-style-type: none"> <li>• Knee assessment including assessment for effusion</li> <li>• Passive and active ROM</li> <li>• Hop Test               <ul style="list-style-type: none"> <li>○ Single Hop</li> <li>○ Triple Hop</li> <li>○ Crossover hop</li> </ul> </li> <li>• Isometric knee extension at 60° and 90° with HHD</li> <li>• Isometric knee flexion at 60° degrees with HHD</li> <li>• Single leg isometric squat at 90° on 3PQ</li> <li>• Single leg jump on 3PQ</li> <li>• IKDC, ACL-RSI</li> </ul>
<b>Month 9+</b>  <b>Must meet criteria prior return to sport</b>	<ul style="list-style-type: none"> <li>• Full, symmetric ROM</li> <li>• 100% LSI for isometric and functional testing</li> <li>• ACL-RSI &gt; 56</li> <li>• Safe integration and progression to sport</li> </ul>	<ul style="list-style-type: none"> <li>• Knee assessment including assessment for effusion</li> <li>• Passive and active ROM</li> <li>• Hop Test               <ul style="list-style-type: none"> <li>○ Single-leg triple Hop</li> <li>○ Medial triple hop</li> <li>○ Medial rotation hop</li> </ul> </li> <li>• Isometric knee extension at 60° and 90° with HHD</li> <li>• Isometric knee flexion at 60° with HHD</li> <li>• Single leg isometric squat at 60° on 3PQ</li> <li>• Single leg jump on 3PQ</li> <li>• Agility T-test</li> <li>• IKDC, ACL-RSI</li> </ul>

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