

### Anterior Cruciate Ligament Reconstruction with Meniscal Repair Guideline

| Time                 | Goals  | Precautions/Restrictions  | Treatment   |
|----------------------|--|---|---|
| <b>Weeks 0 – 2</b>   | <ul style="list-style-type: none"> <li>Reduce pain and swelling</li> <li>Full passive extension</li> <li>Maintain patellar mobility</li> <li>Active quadriceps control</li> </ul>  | <ul style="list-style-type: none"> <li>Brace locked in extension with WB</li> <li>No open chain knee extensions</li> <li>No isolated hamstring strengthening with hamstring autograft</li> <li>NWB first 2 weeks</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 (as tolerated)               <ul style="list-style-type: none"> <li>Extension focus</li> </ul> </li> <li>Quadriceps recruitment/NMES</li> <li>Patellar mobilization</li> <li>Gait training with crutches</li> <li>Initiate BFR; if applicable</li> </ul> |
| <b>Weeks 2 – 6</b>   | <ul style="list-style-type: none"> <li>Full and pain-free ROM</li> <li>Progression of quadriceps strength/endurance</li> <li>SLR without extensor lag</li> <li>Normalized gait mechanics</li> <li>DL squat to 90° with good mechanics</li> </ul> <p style="text-align: center; color: red;">Please contact surgical team if full knee extension and unassisted straight leg raise without extensor lag not achieved by week 4.</p> | <ul style="list-style-type: none"> <li>No open kinetic chain exercises</li> <li>No running, jumping, cutting, pivoting, or twisting</li> <li>Avoid painful activities/exercises</li> <li>Brace unhinged with excellent quad control</li> <li>Partial weight-bearing 2-6 weeks</li> </ul>  | <ul style="list-style-type: none"> <li>Progress ROM as tolerated</li> <li>Gait training progressing from assistive device</li> <li>Closed kinetic chain strengthening as tolerated</li> <li>Core stabilization exercises</li> <li>Optional therapies: anti-gravity treadmill</li> </ul>             |
| <b>Weeks 6 – 12</b>  | <ul style="list-style-type: none"> <li>Full, symmetric and pain-free ROM</li> <li>Progress quadriceps strength/endurance</li> <li>Increase functional activities</li> <li>Discontinue brace with normalized gait mechanics</li> </ul>  | <ul style="list-style-type: none"> <li>Avoid painful activities/exercises</li> <li>May initiate open kinetic chain exercise               <ul style="list-style-type: none"> <li>90-0° at 6 weeks (BW only)</li> <li>90-0° with progressive loading at 10 weeks</li> </ul> </li> <li>No running, jumping, cutting, pivoting, or twisting</li> </ul> | <ul style="list-style-type: none"> <li>Progressive double and single limb strengthening</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> </ul>                             |
| <b>Weeks 12 – 16</b> | <ul style="list-style-type: none"> <li>Full, symmetric ROM</li> <li>Progressive resistance training</li> <li>Pass Return to Run criteria (See appendix)</li> <li>No effusion with increased activity</li> </ul>  | <ul style="list-style-type: none"> <li>Avoid painful activities/exercises</li> <li>No jogging on painful or swollen knee</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 (between 12-16 weeks)</li> <li>Initiate 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 a painful or swollen knee</li> <li>No participation in sports</li> </ul>   | <ul style="list-style-type: none"> <li>Progression of return to jogging program</li> <li>Continue progressive resistive exercise (PRE)</li> <li>Increase intensity of plyometric and agility training</li> <li>Implement ARC Program</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.

## Anterior Cruciate Ligament Reconstruction Functional Assessment

| Phase  | Criteria   | Testing   |
|--|--|---|
| <b>Weeks 12-16</b><br><br><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><br><br><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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