

POSTERIOR CRUCIATE LIGAMENT REPAIR

General considerations

- Isolated posterior cruciate ligament injuries are uncommon, and often occur in combination with other ligamentous injuries to structures like the MCL, PLC (posterolateral corner), ACL and meniscus
- When rehabbing the PCL in conjunction with another ligamentous injury, please utilize the more conservative protocol.
- Due to the action of the PCL limiting knee IR beyond 90 degrees of flexion, patients should not exceed 90 degrees of knee flexion until 4 weeks post-op.
- Patients will be WBAT in a brace locked in full extension for 4 weeks (unless otherwise dictated by the surgical team)
- Due to the inherent laxity that can develop with PCL reconstruction, advise you to be on the side of caution with stretching.

Phase I (Week 0-4)

- WBAT with crutches, braced locked in full extension
- Manual interventions to manage swelling, mobilize patellar and incision sites
- Avoid knee flexion AROM and hamstring activation, passive knee flexion is ok
 - Do not exceed 90 degrees of passive knee flexion
- Active knee extension is ok, avoid hyperextension
 - Quad, set, SLR, SAQ, LAQ interventions should be prioritized to improve quadriceps function to assist in WB progressions (may consider using uninvolved limb to assist with lowering from LAQ)
 - Utilize NMES to assist with strengthening

Phase II (Weeks 4-8)

- ROM restrictions are lifted
 - Can go beyond 90 degrees, but progress slowly and cautiously to minimize potential for laxity in the PCL
- May initiate flexion AROM, but proceed cautiously (gravity-eliminated plane)
 - No resisted hamstring strengthening
- Continue emphasis on quadriceps strengthening
 - Once able to perform regular SLR without extension lag, you may progress WB in the brace
 - Unlock brace:
 - To 30 deg at week 4, adding approximately 15 degrees/week until week 8 post-op
- Once brace is unlocked with adequate quad control, may initiate CKC/WB exercises inside knee brace
 - Small range squats, step-ups, calf raises, etc...
- Be mindful of foot position with CKC exercises
 - Avoid excessive IR at the knee to reduce stress on the PCL, especially if approaching or going beyond 90 degrees of knee flexion

PAGE 2

Phase III (Weeks 8-12)

Goals are to protect the repair, progress to FWB, continue ROM and strength progressions

- Progress to FWB without knee brace if:
 - Patient has adequate/full pain-free ROM
 - Adequate quadriceps strength and control
- Continue to limit excessive, end-range stretching of the knee in both flexion and extension/hyperextension
- May initiate resisted hamstring strengthening
- Continue quadriceps, hip resistance exercises
- Begin incorporating more dynamic SL balance exercises to work on knee stability
- May work on more dynamic CKC strengthening, but do not forgo the importance of isolated, OKC strengthening to ensure symmetry and avoid compensations that may occur during CKC activities

Phase IV (Weeks 12-16)

- Continue to work on progressive strengthening, endurance, and power exercises
- May incorporate more sport-specific movement patterns and light plyometrics
- As activity levels increase, ensure that patients are not developing DOMS or post-activity swelling
- Consider functional testing to determine readiness for plyometrics/running (no hop testing until 6 months post-op)

Phase IV (Weeks 16+)

- Continue strengthening program and plyometrics
- Initiate return to running program once:
 - MD clears it
 - Demonstrate full, pain-free ROM
 - Surgical limb strength 80+ % of the uninvolved side via dynamometry testing
 - Pain-free with SL hopping in place
 - Demonstrate normalized gait and good neuromuscular control through the surgical limb
- Consider functional testing including hop testing for readiness to return to sport
 - Hop testing can be performed at 6 months
 - Surgical limb should be >90% symmetry to the uninvolved for return to sport
 - Return to Sport usually occurs between 6-9 months