

Rehabilitation Protocol: Posterior Cruciate Ligament (PCL) Reconstruction

Date of Surgery: _____

Graft: ☐ Allograft ☐ Autograft Concomitant PLC, MCL, or ACL reconstruction – use the Multiligament protocol

Prevent posterior tibial sag at all times: maintain anterior pressure on the proximal tibia during flexion; perform passive flexion prone. Resistance for hip exercises must be proximal to the knee. **No active hamstring contraction until 4 weeks and no open chain hamstring exercises until 12 weeks.**

Progression is criteria-based. Outcome measures: LEFS, IKDC, NPRS. Please contact our office with any questions or concerns.

☐ Phase I – Protection (Weeks 0–4)

- **Weightbearing: Partial weightbearing with crutches**
- **Hinged Knee Brace: Week 0–1:** locked in full extension except PT/exercise. **Weeks 1–4:** locked in full extension for ambulation; removed for therapy, exercise, and sleep
- **Range of Motion** – Passive flexion prone with anterior tibial support. **Weeks 0–2: 0–70°; progress to 90° by weeks 4–6**
- **Precautions:** No active knee extension 90–70° until 4 weeks
- **Therapeutic Exercises**
 - Quad sets with NMES (quad stim); ankle pumps
 - SLR (all planes) with brace locked in extension, progressive resistance as tolerated
 - Hip abduction/adduction with resistance proximal to the knee
 - Hamstring and calf stretching; theraband calf press progressing to standing toe raises with knee extended
- **Criteria to Progress:** Full extension; flexion progressing toward 90°; good quad set and SLR

☐ Phase II – Early Strengthening (Weeks 4–12)

- **Weightbearing:** As tolerated with crutches; **discontinue crutches at 6–8 weeks;** may convert to PCL brace
- **Hinged Knee Brace: Weeks 4–6:** unlocked for gait training/exercise; transition to PCL brace per our office
- **Range of Motion** – Maintain full extension; **90° by weeks 4–6; 130° by 12 weeks** (standard bike once >110°)
- **Therapeutic Exercises**
 - **Weeks 4–8:** Gait training; multi-angle quad isometrics (60–20°); wall slides and mini squats 0–30°; leg press 0–60°; bilateral proprioception
 - **Weeks 8–12:** Stationary bike (seat high); Stairmaster; closed chain TKEs; leg press 0–90°; balance and proprioception
 - **Weeks 7–12:** Open chain knee extension PRE 60–0° (monitor patellar symptoms)
 - **Week 12:** Quadriceps isometric strength testing at 60°
- **Criteria to Progress:** Normal gait without crutches; 0–130°; quad isometric strength ≥70% of contralateral limb

☐ Phase III – Strengthening and Running (Weeks 13–24)

- **Therapeutic Exercises**
 - Squats and leg press progressing to 0–90° (eccentrics, then single leg); hip, gluteal, hamstring, and calf PREs
 - Proprioception/balance progression; maintain flexibility

- **Running progression** when cleared – quad strength ~70–80% of contralateral limb; treadmill walking to jogging
 - Plyometric progression initiation
- **Criteria to Progress:** Strength, hop, and functional testing $\geq 85\%$ of contralateral limb; psychological readiness

☐ **Phase IV – Return to Sport (Month 9+)**

- **Therapeutic Exercises**
 - Advance plyometrics; cutting and sport-specific drills
 - Maintain strength, endurance, and function
- **Return to Sport: No earlier than 9 months** – return-to-sport assessment with quad strength and hop testing $\geq 90\%$ of contralateral limb; physician clearance