



Daniel J. Kaplan, MD
 Assistant Professor of Orthopaedic Surgery
 Chief, Division of Sports, Bellevue Hospital
 Telephone number: 929-455-2500

ACL and PCL Reconstruction Postoperative Rehabilitation Protocol

Phase 1: 0-6 Weeks (Max Protection)—**NWB, Prone ROM only**

- **Weightbearing:** Non-weightbearing (x 6 weeks)
 - **Dynamic PCL Brace:** worn for 6 weeks post-op
 - Locked in full extension x 1 week
 - Unlocked for exercises, starting Postop day 7
 - **Range of Motion: PRONE ONLY** (Avoid tension on PCL from gravity)
 - Passive flexion 0-90
 - Active Assist extension 70° flexion to 0° (weeks 0-2)
 - 90° flexion to 0 degrees (weeks 2-6)
 - **NO active knee flexion or open chain hamstring isometrics x 8 weeks**
 - **Therapeutic Exercises:**
 - 0-2 weeks:
 - Patella mobilization
 - Towel extensions
 - Prone hangs
 - SLR supine with brace locked at 0 degrees
 - Ankle Pumps
 - 2-6 weeks:
 - Short crank (90 mm) ergometry
 - SLR's (all planes): Progressive Resistance
 - Multiple angle Quadriceps isometrics: 60-20°
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Phase 2: 7-12 Weeks (Moderate Protection)—**Progressive Weightbearing, Lift Prone Restrictions**

- **Weightbearing:**
 - Begin TTWB (week 6) to 25% PWB, then 50%
 - WBAT by 8 weeks postop
 - Discontinue crutches, then brace when can ambulate without limp
- **Hinged Knee Brace:** Gradually wean off brace
 - Unlocked
- **Range of Motion:** AAROM/PROM 0-125°
 - **NO active knee flexion or open chain hamstring isometrics x 8 weeks**
- **Therapeutic Exercises:**
 - Initiate forward step-up program

- Stationary bike with low resistance (maximum 70 knee° flexion)
- Progress closed kinetic chain exercises (squats 0-60°, leg press 0-90°)
- Progress proprioceptive training

Phase 3: 13-20 Weeks (Controlled Activity)—WBAT, ROM As Tolerated

- **Weightbearing:** Full Weightbearing, no brace
 - **Range of Motion:** Full, painless ROM
 - **Therapeutic Exercises:**
 - Continue previous exercises
 - Emphasis on eccentric quadriceps strengthening
 - Continue closed kinetic chain mini squats, step-ups, step-downs, lateral lunges and leg presses
 - Hip abduction/adduction
 - Initiate front lunges
 - Calf raises (gastroc and soleus strengthening)
 - Bicycle and stairmaster for endurance
 - Initiate pool running (side shuffle, backward, forward)
 - Initiate walking program
 - Initiate isokinetic exercise 100-40° (120-240°/spectrum)
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Phase 4: 4-6 months (Light Activity)—Initiate Running Program

- **Weightbearing:** Full Weightbearing, no brace
 - **Range of Motion:** Full, painless ROM
 - **Therapeutic Exercises:**
 - Continue strengthening exercises –emphasize quadriceps & co contraction
 - Initiate plyometric program
 - Initiate running program*
 - Initiate agility drills
 - Initiate sport-specific training and drills
 - ***Criteria to initiate running program**
 - Acute reconstruction may begin at 4-5 months
 - Chronic reconstruction may begin at 5-6 months
 - Satisfactory clinical exam
 - Unchanged KT Test
 - Satisfactory isokinetic test
 - Quadriceps bilateral comparison (80% or greater)
 - Hamstring bilateral comparison (110% or greater)
 - Quadriceps torque/body weight ratio (55% or greater)
 - Hamstring/quadriceps ratio (70% or greater)
 - Proprioception testing 100% of contralateral side
 - Functional hop test >75% of contralateral side
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Phase 5: 6-9 months: Gradual Return to Activity

- **Weightbearing:** Full Weightbearing, no brace
- **Range of Motion:** Full, painless ROM
- **Therapeutic Exercises:**
 - Continue strengthening programs
 - Continue proprioception & neuro muscular control drills
 - Continue plyometric program
 - Continue running and agility program
 - Progress sport specific training and drills
- **Criteria to return to activities:**
 - Satisfactory clinical exam
 - Unchanged KT test
 - Satisfactory isokinetic test
 - Proprioception testing 100% of contralateral leg
 - Functional hop test > 80% of contralateral leg