

## Keith T. Corpus, MD

# PCL Injury: Non-Operative (Conservative)

This information and protocol is a guideline, individual variations and changes will apply

#### PHASE I: 0-6 WEEKS

- o Precautions
  - PRICE (Protect, Rest, Ice, Compress, Elevate) protocol
  - Avoid hyperextension (12 weeks)
  - Prevent posterior tibial translation (12 weeks)
  - Isolated hamstring exercises should be avoided until week 12
  - Partial WB with crutches (2 weeks)
  - Prone passive ROM from 0-90 deg for the first 2 weeks, and then progress to full ROM
  - PCL Jack brace or Rebound brace to be worn at all times, including rehabilitation and sleep (minimum of 12 weeks)
- o <u>Goals</u>
  - PCL Ligament protection
  - Edema reduction to improve passive ROM and quadriceps activation
  - Address gait mechanics
  - Patient education
- Therapeutic exercise
  - Patellar mobilizations
  - Prone passive ROM
  - Quadriceps activation
  - Quadriceps sets
  - Straight leg raises (SLR) once the quadriceps are able to lock joint in terminal extension and no lag is present
  - Gastrocnemius stretching
  - Hip abduction/adduction
  - Stationary bike with zero resistance when ROM < 115 deg</li>
  - Weight shifts to prepare for crutch weaning
  - Pool walking to assist with crutch weaning
  - Calf raises and single leg balance when weaned from crutches
  - Upper body and core strength as appropriate



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#### PHASE II: 6-12 Weeks

- o <u>Precautions</u>
  - Continued avoidance of hyperextension
  - Prevent posterior tibial translation
  - Limit double leg strengthening exercises to no more than 70 deg of knee flexion
  - WBAT
  - Full ROM, supine and prone ROM after 6 weeks
  - PCL Jack brace or Rebound Brace to be worn at all times
- o <u>Goals</u>
  - PCL ligament protection
  - Full ROM
  - Address gait mechanics during crutch weaning
  - Double leg strength through ROM (no greater than 70 deg knee flexion) and single leg static strength exercises
  - Reps and set structure to emphasize muscular endurance development (3 sets of 20 reps)
- Therapeutic exercise
  - Continue PRICE protocol
  - Continue exercises as weeks 1-6
  - Gastrocnemius and light HS stretching
  - Leg press limited to 0-70 deg of knee flexion
  - Squat progression
  - Static lunge
  - HS bridges on ball with knees extended
  - Progressive resistance stationary bike
  - Light kicking in pool
  - Incline treadmill walking (7-12% incline)
  - Single leg dead lift with the knee extended
  - Proprioceptive and balance exercises



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#### PHASE III: 12-18 weeks

- o <u>Precautions</u>
  - Discontinue PCL Jack brace
- o <u>Goals</u>
  - Reps and set structure to emphasize muscular strength development
  - Progress ROM strength to beyond 70 deg knee flexion
  - Isolated HS exercises may begin after week 12
  - Prepare athlete for sport-specific activity
- Therapeutic exercise
  - Double leg press with progression to single leg
  - Single leg knee bends
  - Balance squats
  - Single leg dead lift
  - Single leg bridges starting during week 16
  - Continue bike and treadmill walking
  - Running is allowed once the patient has demonstrated sufficient strength and stability with functional exercise and quad girth is >= 90% compared to the contralateral normal side
    - Week 1 = 4 min walk; 1 min jog for 15-20 min
    - Week 2 = 3 min walk; 2 min jog for 20 min
    - Week 3 = 2 min walk; 3 min job for 20 min
    - Week 4 = 1 min walk; 4 min jog for 20 min
    - Once running progression is completed, continue single plane agility with progression to multi-planar agility
  - Clinical examination and/or PCL stress radiographs to objectively verify healing of PCL after week 15

6/18/20