



Indiana University Health

IU Health Physicians Orthopedics & Sports Medicine

PCL TEAR (NON-OP)

NON-OP PHYSICAL THERAPY PROTOCOL

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Patient Name: _____ **Date:** _____

X Evaluate and Treat **X** Provide patient with home program

Frequency: **2-3** x/week x **4** weeks

- **PHASE I: 0-6 WEEKS**

- Precautions

- PRICE (Protect, Rest, Ice, Comrpess, 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)
- Goals
 - 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
 - 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
- **PHASE II: 6-12 Weeks**
 - Precautions
 - 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
 - Goals
 - 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
- **PHASE III: 12-18 weeks**
 - Precautions
 - Discontinue PCL Jack brace
 - Goals
 - 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 $\geq 90\%$ 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 jog 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

This protocol is adopted from Pierce CM, O'Brien L, Griffin LW, LaPrade RF. Posterior cruciate ligament tears: Functional and postoperative rehabilitation. Knee Surgery, Sports Traumatology, Arthroscopy. 2013; 21(5): 1071-1084. <http://doi.org/10.1007/s00167-012-1970-1>

By signing this referral, I certify that I have examined this patient and physical therapy is medically necessary. This patient ___ would X would not benefit from social services.



Date:_____

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