Indiana University Health

*IU Health Physicians Orthopedics & Sports Medicine*

# PCL TEAR (NON-OP)

## NON-OP PHYSICAL THERAPY PROTOCOL

**Bryan M. Saltzman, M.D.**
Indiana University Health Physicians
Assistant Professor of Orthopaedic Surgery, Indiana University
Sports Medicine, Cartilage Restoration, Shoulder/Elbow
IU Health Methodist Hospital – 1801 N Senate Ave, Indianapolis, IN 46202
IU Health North – 201 Pennsylvania Pkwy #100, Carmel, IN 46280
317-944-9400
www.bryansaltzmanmd.com

---

**Patient Name:** _____ **Date:** _____

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

**Frequency:** ___2-3_____**x/week x** ____4_____**weeks**

**Precautions:**

- Avoid greater than 90° of knee flexion for the first 6 weeks post injury.
- If greater than 90° of knee flexion is performed, this MUST be done with an anterior drawer force to prevent posterior subluxation.
- Posterior knee pain may mean the patient is progressing too quickly.

**Guidelines:**

- Rehabilitation must be highly individualized.
- Quadriceps strength is related to return to sport and patient satisfaction.
- Protect the patellofemoral joint.
- Avoid open-chain knee flexion exercises. Utilize closed-chain exercises to enhance function of hamstrings.
- Early considerations: Quadriceps sets, straight leg raises, biofeedback, electrical stimulation for quads.

**Phase I: Day 0-10**

- Range of motion: 0 – 60°
- Effusion Control: Ice, elevation, NSAIDs
- Gait/Weightbearing: Protected weightbearing (50%) with crutches locked in extension.
- Exercise:
    - Isometric quadriceps when pain permits
    - Avoid open chain hamstring strengthening exercises

**Phase II: Day 10-21**

- Range of motion: Early range of motion within limits of pain: Active-assisted and passive range of motion less than 60°. Can increase to 90° of knee flexion, but this MUST be done with anterior drawer force protecting the knee.
- Effusion control: Ice, elevation, NSAIDs, electrical stimulation.
- Gait/Weightbearing: Weight bearing as tolerated with knee brace locked in extension.
- Discontinue crutches when patient is able to and the effusion in controlled.
- Exercise:
    - Isometric quadriceps when pain permits
    - Leg press 0-60°
    - Avoid open chain hamstring strengthening exercises
- Avoid posterior tibial subluxation: Place a pillow under posterior aspect of lower leg when lying down.

**Phase III: Weeks 3-5**

- Range of motion: Progress as tolerated.
- Effusion control: Ice, elevation, NSAIDs, electrical stimulation
- Gait/Weightbearing: Weightbearing as tolerated.
- Discontinue the large hinged knee brace as tolerated.
- Obtain a functional PCL brace.
- Exercise/Functional Training:
    - Focus on increasing strength and endurance of quadriceps.
    - Open chain knee extension exercises allowed IF no patellofemoral symptoms
    - Quadriceps sets and terminal knee extension.
    - May perform hip extension with knee extension.
    - No hamstring exercises with knee flexed.
    - Bike
    - Mini-squats 0-60°

  - Leg press 0-60°
  - Continue anterior drawer with knee flexion as above.

**Phase IV: Weeks 5-8**

- Range of motion: Monitor
- Effusion: Monitor
- Gait/Weightbearing: As tolerated.
- Exercise/Functional Training:
  - Closed chain exercises to improve functional strength:
  - Mini squats
  - Wall slides
  - Step ups and leg press
  - Isotonic quadriceps progressive resistance exercises.
  - Proprioceptive training follows strengthening: Slide board

**Phase V: Weeks 8-12**

- Begin a running program
- Gradual return to sport specific training Return to sports criteria:
- Full pain-free knee extension
- Full pain-free knee flexion
- Quadriceps strength > 85% of contralateral side
- Continue PCL brace until full return to play with no effusion (remainder of season)

**Frequency: _____x/week x _____weeks**

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

**_____ Date: _____**

**Bryan M. Saltzman, MD**