PHOENIX
SHOULDER & KNEE

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Physical Therapy Protocol for Non-Operative treatment of PCL Tear

Goals of Rehabilitation:

Promote tissue healing
Decrease pain
Decrease effusion
Increase strength, endurance, and power
Improve proprioception and enhance dynamic stability
Reduce functional limitations and disability

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:

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.

Muscle function:
Open chain knee extension: 90-60° and 20-0°
Closed chain: Mini-squats, wall slides, step-ups, leg press/squat

Day 0-10:

Range of motion:	Progress as tolerated
Effusion:	Ice, elevation, NSAIDs, electrical stimulation
Gait/Weightbearing:	Weightbearing as tolerated with assistive device as needed and brace; brace may need extension stop
Exercise:	Isometric quadriceps when pain permits
	Avoid open chain hamstring strengthening exercises

Day 10-21:

Range of motion:	Early range of motion within limits of pain: Active-assisted and passive range of motion less than 90°. If greater than 90° of knee flexion, this MUST be done with anterior drawer force protecting the knee.
Effusion:	Ice, elevation, NSAIDs, electrical stimulation
Gait/Weightbearing:	Progress to weightbearing as tolerated with knee brace locked.
	Discontinue crutches when pain and effusion are well controlled.
	Discontinue brace when adequate quadriceps control is achieved.
Exercise:	Isometric quadriceps when pain permits
	Avoid open chain hamstring strengthening exercises
	Avoid posterior tibial subluxation: Place a pillow under posterior aspect of lower leg when lying down.

Obtain a functional PCL brace.

Weeks 3-4:

Range of motion: Progress as tolerated.

Avoid open chain hamstring strengthening exercises

Continue anterior drawer with knee flexion as above.

Effusion: Ice, elevation, NSAIDs, electrical stimulation

Gait/Weightbearing: Begin SLB activities as tolerated.

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.

Avoid open chain hamstring strengthening exercises

Week 4 and beyond:

Range of motion: Monitor

Effusion: Monitor

Gait/Weightbearing: Progress SLB activities 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

Avoid open chain hamstring strengthening exercises

Return to sports criteria:

Full pain-free knee extension

Full pain-free knee flexion

Quadriceps strength > 85% of contralateral side per Biodex testing

Continue PCL brace until full return to play with no effusion (remainder of season)

Other:

Monitor posterior drawer test: Endpoint should stiffen over 8-10 weeks

Inform patient that they may have abnormal laxity of the knee that will persist