Connecticut Orthopaedics

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Posterior Cruciate Ligament (PCL) Rehabilitation
Non-Operative Protocol

Phase I – Maximum Protection
Weeks 0 to 6:

- Partial bearing with crutches x2 weeks
- PROM must be performed in prone (within ROM limits) x2 weeks
- Avoid isolated hamstring exercises

Goals
- PCL protection, prevent posterior tibial translation
- Reduce inflammation
- Normalize patella mobility with manual mobilizations
- Avoid hyperextension
- Proper gait mechanics asap

Exercise progression
- Quad activation exercises
- Straight leg raises when no quad lag is present
- Prone passive knee flexion, within limits (see below)
- Hip abd/add exercises
- Upper body exercise, core muscle training as indicated
- Stationary bike without resistance, when ROM >115 degrees

ROM limitations
- 0-2 weeks: 0-90 degrees
- 2-6 weeks: progress gradually as tolerated

Phase II – Progressive Stretching and Early Strengthening
Weeks 7 to 12:

Goals
- PCL protection, prevent posterior tibial translation
- Full ROM, avoid hyperextension
- Normalize gait mechanics
- Normalize patella mobility with manual mobilizations

Exercise progression
- Bilateral squat progression, limited to 70 degrees
- Single leg exercises in static positions (no single leg knee flexion beyond 30 degrees)
- Leg press bilateral, limited to 70 degrees
- Closed kinetic chain hip strengthening
- Step-up and step-down progression
- Stationary biking with progressive resistance and duration
- Proprioception drills
- Single leg deadlift with knee extended
- Incline treadmill walking

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Phase III – Advanced Strengthening and Proprioception

Weeks 13 to 18:

Goals

- Progressive strengthening and endurance training
- Eliminate movement dysfunction (i.e. no dynamic valgus at the knee)
- Quad girth 90% (vs uninvolved limb)

Exercise progression

- Begin isolated hamstring exercise, progress slowly
- Lunge progression (retro, walk and split) as indicated
- Leg press with single limb
- Add resistance and duration to stationary biking
- Weighted squat progression, can progress past 70 degrees at 16 weeks
- Single leg bridges, knees bent, starting at 16 weeks
- When good quad control in functional drills, may begin jogging progression

Criteria for progression to Phase IV

- Pass preliminary functional test at >90% (involved vs uninvolved limb)
    - See testing protocol

Phase IV – Advance Strengthening & Return to Sport

Weeks 19 to 24:

Goals

- Power development

Exercise progression

- Sport-specific agility drills
- Advanced ladder series
- Linear running progression
- Hurdle and plyo box progressions
- Sport specific field/court drills
- Non-contact drills

Criteria to be released for return to sport

- Follow-up examination with the physician
- No evidence of instability or giving way
- Pass return-to-sport functional test at >90% (involved vs uninvolved limb)
    - See testing protocol
- Display symmetry and confidence in high-speed cutting, multiplane plyometric drills, sprinting and decelerating