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Postoperative Rehabilitation Guidelines
Posterior Cruciate Ligament Reconstruction

The following protocol is intended as a general guideline for physical therapist, athletic trainer, and patient after arthroscopic posterior cruciate ligament (PCL) reconstruction. These guidelines are designed to facilitate the expedited and safe return to athletic or professional activity and is based on a review of the current scientific principles of knee rehabilitation. For the treating health care provider this protocol should not serve as a substitute for individualized clinical decision making during the patient's post-operative course following PCL reconstruction. It should rather take into consideration the individual's physical findings, progression, and possible post-operative limitations. If the therapist or patient requires assistance or encounters any postoperative complication they should consult with **your surgeon.**

Start supervised physical therapy within 7-10 days after surgery

Phase I (Postoperative Phase)

Postop Days 1-2

- WBAT with crutches as needed with brace locked in full extension
- CPM: start at 0-45 and advance as tolerated (use 6-8 hours/day, may use in intervals)
- ROM as tolerated
  - Do not force flexion
- Focus on Extension (avoid pillow under knee)
- Patellar mobilization (superior-inferior and medial-lateral)
- Ankle pumps, SLR, Quad sets
- Edema Reduction, Aggressive Cryotherapy

Postop Days 3-14

- WBAT with brace locked in extension, may unlock brace when sitting
- Gait training, D/C crutches if gait non-antalgic
- ROM
  - Continue emphasis on full extension (support heel at night, prone hangs, extension sitting)
  - CPM 6-8h/day (may use at night), discontinue when ROM 0-110 degrees
- Strengthening
  - Isometric quadriceps sets, SLR, ankle pumps
  - Closed kinetic chain exercises (minisquats, short-crank ergometry)
  - Strengthening of hip abductor/gastrocnemius
  - Avoid hamstring curls/**Avoid active knee flexion**
  - Well leg exercises
- Patellar mobilization all directions
- ICE PRN

Phase II (Initial Rehabilitation Phase)

Postop Weeks 2-6

- Continue with all exercises from Phase 1
- Continue patellar mobilization
- PROM only 0-125 degrees
- **Passive Knee Flexion only**
- Strengthening
  - Active knee extension with progressive resistance (start at 5 lbs and progress 2-3 lbs/week)
  - Hamstring, hip abductor, gastroc/soleus strengthening
  - Well leg exercises (unilateral leg press, lunges, theraband exercises)
  - If tolerated at 4 weeks ok to start leg press 0-60.
- No active open kinetic chain exercises
- Bike when range reaches 115 degrees
- Initiate proprioceptive/neuromuscular exercises
  - Single limb stance
- ICE PRN
- Monitor for patellofemoral symptoms

Phase III (Progressive Strengthening Phase)

Postop Weeks 7-12

- Restore full ROM (flexion and extension equal to contralateral side)
- Continue all exercises from Phase II
- Strengthening
  - Progressive hip strengthening

    - Progressive squatting/leg press program
- Initiate and gradually increase active knee flexion
- **Avoid patello-femoral pain → resume isometric exercises as needed**
- Isotonic knee extensions
- Bike, stairmaster, elliptical
    - Retrograde treadmill ambulation
- Progressive Stepdown Program

Phase IV (Return to Activity Phase)

Postop weeks 13-16

- Enhance strength, flexibility, endurance, and neuromuscular control
- Start gentle plyometric drills
- Initiate running program when 8" stepdown satisfactory
- Initiate light sport-specific agility exercises if running without symptoms

Postop weeks 17-24

- Normalize strength, flexibility, endurance, and neuromuscular control
- Advance plyometric program
- Progress running and agility program
- Initiate cutting, jumping drills
- Continue sport-specific skill program and functional progression
- Gradual return to sport (MD directed)

- Isokinetic testing (concentric) of hamstrings (goal 100%) and quadriceps (goal >90%)
- Single leg hop test (goal >90%)
- Complete functional knee scores (subjective scoring, IKDC, Tegner, Lysholm, KOOS)

Please do not hesitate to contact the surgeon's office to discuss the individual patient's findings and progress at any time.