



# GOLDEN STATE ORTHOPEDICS & SPINE

## POSTERIOR CRUCIATE LIGAMENT (PCL) AND POSTERO-LATERAL CORNER REHABILITATION

**Exercises consisting of active hamstring muscle contractions are not allowed until 2 months post-surgery.** This is to protect the posterior cruciate ligament graft against potentially damaging stresses occurring with posterior tibial translation.

### **STAGE 1: WEEK 1:**

**Goals:** Full knee ROM (all ROM exercises must be performed in the prone or side-lying position for the first 4-5 weeks), pain and edema control, initiate normalization of quadriceps recruitment, prevent posterior translation and tibial rotation.

#### • **Non-weight bearing for 4 weeks**

- **Jack Brace** locked at 0 degrees extension for the first 2 weeks, except for passive ROM by ATC or PT for the first month
- Teach partner to perform home stretching exercises 2-3 times/daily
- **ROM exercises to be performed in a prone position or side-lying only.** Grip the heads of the gastroc/soleus group and maintain anterior pressure proximally to the tibia while flexing the knee.
- Advance ROM as tolerated
- Initiate patellar mobilizations and scar mobilization techniques
- Quad sets/SLR in brace locked at 0 degrees extension (assist patient with this exercise until solid quad contraction developed, prevent posterior sag)
- Seated calf exercises

### **STAGE 2: WEEK 2:**

- Stationary bike to increase ROM. Start with high seat and progress to normal height when available, resistance as tolerated
- **Advance Jack Brace from 0-90 degrees after week 2, as tolerated**

### **STAGE 3: WEEK 4:**

- Weight-bear as tolerated (WBAT)
- Double-leg Leg Press

### **STAGE 4: WEEK 5:**

- May initiate aquatic therapy emphasizing on normalizing gait patterns, marching forward/backwards
- Begin weaning off of crutches and nonnalize gait mechanics
- ROM: prone flexion to 120+ degrees, and advance to full ROM
- Treadmill walking - forward and backwards in Jack Brace
- Closed and open chain theraband exercises (avoiding hamstring activation)
- Unilateral step-ups (start with 2" height and progress to normal step height as tolerated)
- Chair/wall squats (keep tibia perpendicular to floor)



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### **STAGE 5: WEEK 6:**

- Single leg stance for balance/proprioception on Airex pad or trampoline

### **STAGE 6: WEEKS-10:**

- May initiate gradual weaning from brace between weeks 8-12
- Quadriceps to hamstrings exercise ratio should be 4:1
- All exercises should be on affected leg at this time
- Cable column exercises - backwards walking, lateral stepping (**NO cross-over stepping or shuffling**)
- Standing leg curls with cuff weights or seated leg curls at 5lbs max

### **STAGE 7: WEEK 10-12:**

- Advance hamstrings strengthening into prone position
- Initiate stair master, versa climber, Nordic track and elliptical trainers
- Slide board - start with short distance and progress as tolerated

### **STAGE 8: WEEK 12-16:**

- **Discontinue use of Jack Brace by week 12**
- Lateral movement supervised by ATC or PT
  - Stepping, shuffling, hopping, cariocas
- Isokinetic exercises 180, 150, 120, 90, 60 degrees per second (8-10 reps each speed up and down spectrum)

### **STAGE 9: WEEK 16-24:**

- Pylometrics - low intensity vertical and lateral hopping to begin, use both feet and progress to single leg
  - Volume for pylometrics (this is not a conditioning exercise, but a strengthening exercise) for rehabilitation
    - 40-60 foot contacts/session for beginners
    - 60-80 foot contacts/session for intermediates
    - 80-100+ foot contacts/session for advanced
- If pylometric exercise intensity is high, the volume must be decreased. Give ample recovery time in between sets
- Initiate sport specific activities under supervision of ATC or PT
- Emphasize on strength and power development
- Running and sport specific drills under ATC or PT supervision
- Isokinetic test for quad strength difference  $\leq 5\%$  and unilateral hamstring/quad strength ratio of 65% or better
- Continue strength testing monthly until patient passes, then perform functional testing
- Functional testing is appropriate for people returning to advanced recreational activities or sports