

PCL RECONSTRUCTION

## Post-Operative Rehabilitation

### PHASE I — MAXIMUM PROTECTION (WEEKS 0 TO 6)

#### GOALS

- Protect the repair - brace locked at 0/0 at all times when not with therapist for 6 weeks
- Weight bearing as tolerated with brace locked in extension for 6 weeks
- Reduce inflammation
- Normalize patella mobility with manual mobilizations

#### EXERCISE PROGRESSION

- Gait training with knee locked in extension in brace
- Patellofemoral mobilizations
- ROM:
  - Week 0-2: Limit ROM 0-90° with passive prone flexion or seated with manual anterior tibial translation by therapist. **STOP AT 0°. DO NOT ALLOW KNEE HYPEREXTENSION.**
  - Week 2-6: Progress PROM to AAROM 0 - 120°. **STOP AT 0°. DO NOT ALLOW KNEE HYPEREXTENSION.**
  - OK to begin upright bike without resistance during week 3.
- Quadriceps setting with towel behind tibia to prevent posterior tibial translation/sag
- Quadriceps, hamstring, gluteal isometrics
- Multi-plane straight leg raises in the brace until 4 weeks. OK to perform out of brace weeks 4-6.
- Clamshells, side steps
- OK for Blood Flow Restriction (BFR) training at 2 weeks following restrictions above.

### Phase I Clinical Pearls:

1. *It is crucial to avoid active hamstring flexion and any posterior tibial translation or sag during rest and all therapy activities.*

### PHASE II — PROGRESSIVE STRETCHING AND EARLY STRENGTHENING (WEEKS 6 TO 12)

#### EXERCISE PROGRESSION

- Continue with modalities to control inflammation
- Open brace 0°-90° when patient demonstrates good quadriceps function
- OK to ambulate with brace unlocked weeks 6-8.
- Discontinue brace at 8 weeks.
- Progress to full knee flexion ROM. **STOP AT 0°. DO NOT FORCE INTO KNEE HYPEREXTENSION.** Minimize posterior tibial translation.

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- May begin active hamstring contractions with active heel slides and prone knee flexion without resistance at week 8.
  - Begin total leg strengthening with SLR program (no resisted hamstrings until 12 weeks)
  - Gym strengthening (leg press, calf raises, abd/add), no resisted hamstrings
  - Bilateral closed kinetic chain squatting
  - Multi-plane open and closed kinetic chain hip strengthening
  - Unilateral step-up progression
  - Stationary biking
  - Pool program; shallow and deep water exercise only. No running.
  - OK to continue Blood Flow Restriction training.

### **PHASE III – ADVANCED STRENGTHENING AND ENDURANCE TRAINING (WEEKS 12 TO 20)**

#### **EXERCISE PROGRESSION**

- Full range of motion
- Advance cardiovascular program; stationary bike, treadmill walking, elliptical trainer
- Increase intensity of closed kinetic chain exercises
- Begin resisted hamstring exercises

### **PHASE IV – ADVANCE STRENGTHENING, IMPACT AND RUNNING PROGRESSION (WEEKS 20 TO 9 MONTHS)**

#### **EXERCISE PROGRESSION**

- Pool running at 20 weeks
- Dry land running at 24 weeks
- Multidirectional agility drills at 7-8 months
- Return to sport 9 months

#### **SPORTS TEST AND FOLLOW-UP WITH PHYSICIAN**

- Follow-up examination with the physician
- Sports test for return to competition at 9 months