

Shane Seroyer, MD Sports Medicine / Arthroscopy Joint Replacement

PCL RECONSTRUCTION ALLO/AUTOGRAFT (Two tunnel technique)

*NO ISOLATED HAMSTRING STRENGTHENING FOR 6 MONTHS

Phase I – Protective Phase (0 - 6 weeks)

Goals:

- Protect healing graft and decrease deleterious stresses
- Reduce pain, inflammation and swelling
- Maintain good quadricep control

Weeks 0-3:

- TDWB in immobilizer with crutches x 6 weeks
- PROM for knee flexion/extension from 0 60° (end of bed)
- Prone hangs/heel props to maintain full knee extension (0cm HHD)
- Patellar mobilizations
- Strengthening:

Quadricep sets

SLR's x 3 planes (flex/abd/add) in immobilizer if quad lag

Weeks 4 – 6:

- Increase PROM for knee flexion/extension to 0 90°
- Strengthening:

Begin quadricep isometrics @ 60°, 45°, 30°, and 15°

Begin open chain extension from 60° to 0°

Add weight to SLR's if patient can maintain good control and no lag

Phase II – Intermediate Phase – Gradual weight bearing (7 – 12 weeks)

Goals:

- Promote gradual return to full weight bearing
- Promote return to basic ADL's
- Decrease residual pain



Weeks 7-12:

- PWB progressing to FWB over 2 weeks with immobilizer off (wean from crutches when no limp)
- Progress ROM to tolerance (gradual increase of 10 15°/week)
- Begin stationary cycling (high seat/low resistance/no toe clips)
- Begin basic balance/proprioception program when full weight-bearing
- Begin flexibility program as needed (HS, ITB, quads, calf)
- Strengthening:

Progress open chain quadricep PRE's from 90° to 0° Start closed chain program when full weight bearing

Mini-squats $(0 - 30^{\circ})$ Forward/lateral step-ups Shuttle (0 - 90°) with high reps/low resistance Leg press $(0 - 90^{\circ})$

Phase III – Protective Strengthening Phase (13 – 24 weeks)

Goals:

- Increase strength and endurance of quadriceps
- Increase neuromuscular control

Weeks 13 – 24:

- KT 2000 test at 70 degrees of flexion
- Continue ROM/flexibility program
- Increase intensity of balance/proprioception program
- Strengthening:

Continue closed strengthening and isolated isotonic quadriceps Begin isokinetic strengthening (Quadriceps ONLY)

May begin swimming, walking, and stairmaster for cardiovascular training

Phase IV – Protective Activity Phase (25 – 35 weeks)

Goals:

Gradual return to running and sport specific agilities

Weeks 25 - 30:

- Continue balance/proprioception program
- Strengthening:

Continue previous closed chain and isolated quadricep strengthening Begin light hamstring isotonics Begin high-speed hamstring isokinetics

Begin straight forward jogging program

Weeks 31 – 35:

- Continue strengthening, proprioception and running program
- Initiate agility program
- Initiate interval sport program

Phase V – Return to Competition (9 months)

Criteria for return to play:

- Physician approval
- Full, non-painful ROM
- Satisfactory clinical exam
- Satisfactory strength test (Quadriceps 90%)
- Successful completion of interval sport program