

# Palmetto Health USC

## ORTHOPEDIC CENTER

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**PCL-PTG RECONSTRUCTION**

### **I. Immediate Post-Operative Phase**

#### **POD 1**

- Brace
  - Brace locked at zero degrees extension
- Weightbearing
  - Two crutches as tolerated (less than 50%)
- Exercises
  - Ankle pumps
  - Quad sets
  - Straight leg raises (3 way) hip flexion, abduction, adduction
  - Knee extensions 60 – 0 degrees
- Muscle Stimulation
  - Muscle stimulation to quads (4 hours a day) during quad sets
- CPM
  - 0 – 60 degrees as tolerated
- Ice and Elevation
  - Ice 20 minutes out of every hour
  - Elevate with knee in extension

### **II. Maximum Protection Phase (Week 2 – 6)**

Goals:           Absolute control of external forces to protect graft  
                      Nourish Articular Cartilage  
                      Decrease Swelling  
                      Decrease Fibrosis  
                      Prevent Quad Atrophy

## **Week 2**

- Brace
  - Brace locked at zero degrees extension
  - Continue to perform intermittent ROM exercises
- Weightbearing
  - As tolerated 50% or greater
- Exercises
  - Multi Angle isometrics 60, 40, 20 degrees
  - Quad Sets
  - Knee extensions 60 – 0 degrees
  - Intermittent ROM 0 – 60 degrees (4 –5 times daily)
  - Patellar mobilization
  - Well leg bicycle
  - Proprioception Training Squats (0 – 45 degrees)
  - Continue electrical stimulation to quads
  - Leg press ( 0 – 60 degrees)
  - Continue Ice and Elevation

## **Week 4**

- Brace
  - Brace locked at zero degrees extension or knee immobilizer
- Full Weightbearing
  - No crutches; one crutch if necessary
- Exercises
  - Weight Shifts
  - Mini Squats 0 – 45 degrees
  - Intermittent ROM 0 – 90 degrees
  - Knee extension 60 – 0 degrees
  - Pool Walking
  - Initiate bike for ROM and endurance

## **Week 5**

- Initiate pool exercises
- Fit for functional posterior cruciate ligament brace

### **III. Controlled Ambulation Phase (Week 7 – 12)**

Goals:           Control forces during ambulation  
                      Increase quad strength

**Week 7**

- Brace
  - Discontinue locked brace, brace opened 0 – 125 degrees

## Criteria for Full Weight Bearing with Knee Motion

- AAROM 0 –115 degrees
  - Quad strength 70% of contralateral side (isometric test)
  - No change in KT test
  - Decrease joint effusion
- Ambulation – with functional brace
  - Exercises
    - Continue all exercises stated above
    - Initiate swimming
    - Initiate vigorous stretching program
    - Increase closed kinetic chain rehabilitation

**Week 8**

- Exercises
  - Continue all exercises as stated above

**Week 12**

- Ambulation – discontinue with brace
- Brace – used for strenuous activities
- KT 2000 Test – Performed
- Exercises
  - Begin Isokinetic 60 to 0 degrees ROM
  - Continue Mini Squats
  - Initiate lateral step ups
  - Initiate Pool Running (Forward Only)
  - Initiate Hamstring Curls ( 0 – 6, low weight)
  - Bicycle for endurance (30 minutes)
  - Begin walking program

**IV. Light Activity Phase ( 3 – 4 months)**

Goals:           Development of strength, power and endurance  
                       Begin to prepare for return to functional activities

- Exercises
  - Begin light running program
  - Continue isokinetic (light speed, full ROM)
  - Continue eccentrics

- Continue Mini-squats/Lateral step-ups
- Continue Closed Kinetic Rehabilitation
- Continue Endurance Exercises

#### Tests

- Isokinetic Test (15<sup>th</sup> week)
- KT 2000 Test (prior to running program)
- Functional Test (prior to running program)

#### Criteria for Running

- Isokinetic Test interpretation satisfactory
- KT 2000 test unchanged
- Functional Test 70% of contralateral leg

### **V. Return to Activity ( 5 – 6 months)**

Advance rehabilitation to competitive sports

Goals: Achieve maximal strength and further enhance neuromuscular coordination and endurance

#### Exercises

- Closed Kinetic Rehabilitation
- High Speed Isokinetics
- Running program
- Agility drills
- Balance drills
- Plyometrics initiated

#### 6 Month Follow-Up

- KT 2000 Test
- Isokinetic Test
- Functional Test

#### 12 Month Follow-Up

- KT 2000 Test
- Isokinetic Test
- Functional Test