



**PT Protocol**  
**PCL Reconstruction**  
**Michael J Rytel, MD**  
**Greater Pittsburgh Orthopaedic Associates**

**Phase 1: 0-6 Weeks**

**Goals**

Protect graft avoiding posterior tibial sag at all times, decrease pain and swelling, restore ambulation, activate quad, ADL strategies

**Brace/crutches**

Brace used when not in PT for first 6 weeks post op  
Post op brace locked in extension when not in PT for first 4 weeks  
WBAT with crutches and brace locked 0-4 weeks  
When not weight bearing may go 0-90 degrees after 4 weeks

**Range of Motion**

Guidelines for range of motion when supervised in PT  
0-1 week: emphasis on getting full extension (avoid overpressure)  
1-6 weeks: gradually progress to full flexion while avoiding posterior sag

**Strength**

Quad sets and straight leg raises, mini-squats after 4 weeks  
Single leg balance  
Hip abduction strength  
Core strength  
Upper body ergometer

**Criteria for Ambulation without Crutches or Brace**

Range of motion within 3 degrees of full extension and flexion of at least 90 degrees  
Straight leg raise X 30 without a lag  
Single leg balance for 20 seconds  
Demonstration of normal gait in PT



## Phase 2: 6-12 Weeks

### Goals

Discontinue Brace, normalize gait, advance strengthening, prepare for jogging  
\*May introduce blood flow restriction (BFR) training

### Range of Motion

Advance brace flexion as tolerated  
Progress to full by 10 weeks post op

### Strength

May use bike for range of motion and early conditioning  
Short arc leg press and low step ups  
Romanian dead lifts  
Body weight and wall squats, progress to single leg squats and lunges  
Hip abduction strength include lateral band walks  
Core to include bridging

### Conditioning

Advance intensity of stationary bike, add elliptical or rowing machine when ready  
\*Balance and proprioception - may introduce perturbation training

### Criteria For Jogging

12 weeks post op, essentially full range of motion, one minute of single leg squats continuously



## **Phase 3: 3-6 Months**

### **Goals**

Transition to home or gym program  
Introduce dynamic movement and advance strength and conditioning

### **Range of Motion**

\*Should have full range. If not alert physician

### **Strength**

Weighted squats, dead lifts, power cleans  
Introduce open chain quad strength, balance with open chain hamstring work (e.g. Russian hamstrings)  
BFR  
Core

### **Conditioning**

Bike, elliptical, rower  
Jogging  
Swimming or aqua jogging

### **Plyometrics and Agility**

Speed ladder, jump rope, box jumps, bounding (late Phase 3)  
Balance and perturbation work



## **Phase 4: Return to Full Activity**

### **Goals**

Sport specific drills advancing to return to play

### **Strength and Conditioning**

Progress strength training and fitness including “Olympic” lifts  
May advance to full sprint

### **Plyometrics and Agility**

Agility and cutting drills advancing to full speed  
Advance box jumps, broad jumps, single leg hops  
High level balance and perturbation work

### **Criteria for Return to Play**

Quad and hamstring strength at 90%  
90% of normal on all single leg hop tests  
Full speed on agility testing (figure 8, shuttle run, etc)  
MD approval