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## ACL Reconstruction Using Tibialis Allograft Physical Therapy Protocol

### Phase I: Immediate Post-operative (Days 1 to 7)

#### Day 1

##### Weight Bearing

- As tolerated with two crutches

##### Range of Motion

- Full passive extension (0 to 90 degrees)

##### Exercises

- Ankle pumps
- Heel prop/prone hang
- Straight leg raise
- Side lying hip abduction/adduction
- Quad sets (use neuromuscular electrical stimulation if poor quad contraction)
- Hamstring/calf stretch
- Continuous passive motion
  - Progress 5 to 10 degrees each day
- Cryotherapy with elevation for pain and inflammation every hour for 20 minutes

#### Days 2 to 7

##### Weight Bearing

- As tolerated with two crutches, progressing to one crutch as tolerated

##### Range of Motion

- 0 to 100 degrees

##### Exercises

- Continue exercises as listed above
- Bike (partial revolutions for range of motion)
- Standing hamstring stretches
- Patellar mobilizations
- Prone hip extension
- Standing weight shifts
- Mini squats (0 to 30 degrees)
- Neuromuscular electrical stimulation with quad sets (if poor quad contraction)
- Continue cryotherapy for pain management

### Phase II: Maximum Protection (Weeks 2 to 6)

#### Goals

- Absolute control of external forces and protect graft
- Nourish articular cartilage
- Decrease swelling
- Prevent quad atrophy

## **Week 2**

### **Weight Bearing**

- As tolerated with one crutch (goal to discontinue crutches by two weeks)

### **Range of Motion**

- Discontinue continuous passive motion once 110 degrees is reached

### **Exercises**

- Continue exercises as listed above
- Bike (progress to full revolutions if able)
- Multi-angle isometrics (90, 60 and 30 degrees)
- Prone hamstring curls
- Mini squats (0 to 45 degrees)
- Leg press (0 to 60 degrees)
- Proprioception training
- Step ups
- Terminal knee extensions
- Continue cryotherapy for pain management

## **Week 4**

### **Range of Motion**

- 0 to 125 degrees

### **Exercises**

- Continue exercises as listed above
- Initiate eccentric quad exercises (lateral step downs)
- Pool walking program
- Emphasize closed kinetic chain exercises
- Standing hip resistance exercises
- Knee extension (90 to 45 degrees)
- Toe/calf raises
- Elliptical/NordicTrack/StairMaster

## **Weeks 6 to 8**

### **Exercise**

- Continue exercises as listed above
- Wall squats
- Hamstring curls (light resistance)
- Lateral walks with resistance
- Monster walks with resistance
- Swimming

## **Phase III: Moderate Protection (Weeks 9 to 16)**

### **Goals**

- Maximal strengthening for quads/lower extremity
- Protect patellofemoral joint

## **Week 10**

### **Range of Motion**

- Should be full, equal to opposite side

### **Exercises**

- Continue exercises as listed above
- Pool running
- Lunges

## **Weeks 12 to 14**

### **Exercises**

- Knee extension 90 to 0 degrees
- May begin a jogging/running program per Dr. Kendall's approval
- Start with straight line jogging/running (walk the curves if on a track)
- Start with a ¼ mile and progress

## **Phase IV: Light Activity (Months 4 to 5)**

### **Criteria to enter Phase IV**

- Full active range of motion
- Quad strength 70 percent of contralateral side
- Minimal to no effusion
- Satisfactory clinical exam

### **Goals**

- Development of strength, power and endurance
- Begin gradual return to functional activities

## **Weeks 20 to 21**

### **Exercises**

- Continue with strengthening program
- Continue with running program
- Initiate plyometric program
- Initiate agility program
- Sport specific training and drills
- Backwards running

## **Phase V: Return to Activity (Months 6 to 7)**

### **Goals**

- Achieve maximal strength and endurance
- Return to sport activities
- Continue with strengthening program for one year following surgery date