

# Anterior Cruciate Ligament (ACL) Reconstruction With Meniscus Transplant

## **Phase 1 – Maximum Protection**

### **Weeks 0 to 6**

- Brace – 0-90 degrees x 6 weeks
  - Recommend locking in extension for sleep
- Non-weight bearing with two crutches for 6 weeks
- Limit knee flexion to 90 degrees for 3 weeks
- Allow 90-120 degrees knee flexion between 3 to 6 weeks

#### Goals:

- Reduce pain and inflammation
- Full knee extension

#### Exercise Progression:

- Quadriceps setting using NMES as needed
- Emphasize patellofemoral mobilizations
- Passive/active knee range of motion with 90 degrees flexion limit
- Quadriceps setting emphasize VMO function
- Multi-plane straight leg raising
- Open chain hip strengthening
- Gait training

## **Phase 2 – Progressing Stretching and Early Strengthening**

### **Weeks 6 to 8**

- Brace – Open to 0-90 degrees for ambulation
- Continue using two crutches, with gradual progression of weight bearing
  - Increase to full weight bearing over the next 2 weeks

#### Exercise Progression:

- Gradual progression to full knee flexion
- Continue to emphasize patella mobility
- Begin bilateral closed kinetic chain strengthening with limited range initially
- Step-up progression
- Begin stationary bike with light resistance initially
- Gait training – normalize gait pattern

**Phase 3 – Advanced Strengthening and Endurance Training**

**Weeks 8 to 14**

Goals:

- Full knee range of motion

Exercise Progression:

- Avoid rotational movements for 14 weeks
- Advance stationary bike program (increase intensity)
- Introduce treadmill walking and elliptical trainer
- Begin unilateral closed kinetic chain program
- Gym strengthening progression (leg press above 90 degrees, hamstring curls, etc.)

**Weeks 10 to 12**

Exercise Progression:

- Outdoor biking
- Lunge progression (retro, walk, and split) as indicated
- Forward/backward elevated treadmill walking
- Deep water pool running progression

**Weeks 12 to 14**

Administer preliminary functional test for physician to review

**Phase 4 – Advanced Strengthening and Running Progression**

**Weeks 12 to 20**

Exercise Progression:

- Progress resistance with squat and lunge strengthening program
- May add leg extensions at 0-30 degrees (exclude patients with patellar or trochlear groove chondral pathology)
- Basic ladder series
- Lateral lunge progression
- Begin linear jogging
- Basic plyometric box progress – week 16

Criteria to progress to Phase 5

- Perform return to sport functional test at 18-20 weeks
- Pass return to sport test at >90% (involved vs uninvolved limb)

**Phase 5 – Return to Sport**

**Weeks 20 to 24**

Exercise Progression:

- Advance ladder, hurdle, and plyo box progressions
- Sport specific field/court drills
- Non-contact drills

Criteria for return to play:

- Follow-up examination with the physician
- Pass return to sport function test at >90% (involved vs uninvolved limb)
- Display symmetry and confidence in high-speed cutting, multi-plane plyometric drills, sprinting, and decelerating

Anticipated return to sport:

- 6-9 months for contact and non-contact athletes