



**Austin Cole, MD**

## **ACL Reconstruction with MCL Repair/Reconstruction**

### **Post-Operative Protocol**

#### **Phase I – Maximum Protection**

##### **Weeks 0 to 6:**

- Brace – 0-90 for 6 weeks
  - Recommend locking in extension for sleep
- Partial weightbearing for 6 weeks
  - 25% week 0-3 week
  - 25-50% Week 3-6
- Knee flexion to 90-100 degrees progressing to full as tolerated
  - Limit to 90 degrees for 3 weeks due to meniscus repair
- Emphasize normal gait pattern
  - Heel-toe with crutches
- Avoid isolated hamstring exercises x 12 weeks

##### **Goals**

- Reduce inflammation and pain
- 0 degrees of knee extension
- Reduce inflammation
- Normalize patella mobility with manual mobilizations
- Proper gait mechanics asap
- Avoid valgus stress at knee

##### **Exercise progression**

- Quadriceps setting using NMES as needed
- Passive and active knee flexion/extension
  - No resistance for 8 weeks
- Multi-plane straight leg raising
  - SLR when no quad lag present
- Open chain hip strengthening
  - No sidelying hip adduction x 8 weeks.

#### **Phase II – Progressive 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 WB to FWB over next 2 weeks
- Avoid isolated hamstring exercises x 12 weeks

##### **Exercise progression**

- Begin stationary bike with light resistance initially
- Full knee range of motion
- Continue to emphasize patella mobility

- Begin bilateral closed kinetic chain strengthening
  - Bilateral squat
  - Standing hip adduction may begin with resistance proximal to knee
- Step-up progression
- Gait training - normalize gait pattern

### **Phase III – Advanced Strengthening and Endurance Training**

#### Goals

- Full knee range of motion – avoid hyper-extension

#### **Weeks 8 to 10:**

#### Exercise progression

- Avoid rotational movements for 14 weeks
- Advance stationary biking program (increase intensity)
- Introduce treadmill walking and elliptical trainer
- Begin unilateral closed kinetic chain program
  - Bilateral squat limited
  - Single leg-no valgus

#### **Weeks 10 to 12:**

#### Exercise progression

- Forward/backward elevated treadmill walking
- Deep water pool running progression

### **Phase IV – Advance Strengthening and Running Progression**

#### **Weeks 12 to 20:**

Administer preliminary functional test for physician to review before 3 month follow up

#### Exercise progression

- Progress resistance with squat and lunge strengthening program.
- Lunge progression (retro, walk and split) as indicated
- Begin isolated hamstring exercise, progress slowly
- Bilateral squat/leg press
- Begin light plyometric drills, progress from bilateral to unilateral
- Begin linear jogging – week 16 if good quad control
- Progress to lateral and rotational stresses at 18 weeks
- Multi-directional drills at 18-20 weeks

Administer preliminary functional test for physician to review before 3 month follow up

### **Phase V – 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 to be released for return to sport

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