



# THE UNIVERSITY OF KANSAS HEALTH SYSTEM

## Anterior Cruciate Ligament (ACL) Reconstruction with Meniscus Repair (Radial/Root Tear)

### Post-Operative Protocol

#### **Phase I – Maximum Protection**

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

- Brace - locked in full extension for 6 weeks
  - Can unlock brace to allow 0-90 degrees for unloaded range of motion only
- Non-weight bearing with two crutches for 6 weeks
- Limit knee flexion to 90-degrees for 3 weeks; allow 90-120 degrees between 3 to 6 weeks

##### Goals

- Reduce inflammation and pain
- 0 degrees of knee extension

##### Exercise progression

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

#### **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

##### Exercise progression

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

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

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

##### Goals

- Full knee range of motion

##### 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
- Gym strengthening progression (leg press above 90-degrees, hamstrings curls etc.)



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## **Weeks 10 to 12:**

### Exercise progression

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

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

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

#### Exercise progression

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

#### Criteria to progress to Phase V

- Pass preliminary functional test at >90% (involved vs uninvolved limb)
  - Hop for distance, triple hop, timed vertical hop, leg press, single limb balance, balance and reach

## **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)
  - High-speed cutting, multi-plane plyometric drills, sprint & decelerate