



# THE UNIVERSITY OF KANSAS HEALTH SYSTEM

## Anterior Cruciate Ligament (ACL) Reconstruction with Meniscus Repair (Peripheral/Vertical)

### Post-Operative Protocol

#### Phase I – Maximum Protection

##### **Weeks 0 to 3**

- Brace - locked in full extension during all ambulation for 3 weeks
  - Can unlock brace to allow 0-90 degrees for unloaded range of motion only
- Use two crutches with touch-down weight bearing (<25% body weight) at all times for 3 weeks
- Limit knee flexion to 90-degrees for 3 weeks

##### Goals

- Reduce inflammation and pain
- 0 degrees of knee extension

##### Exercise progression

- 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

##### **Weeks 3 to 6**

- 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
- Progress as tolerated past 90 degrees of knee flexion

##### Goals

- Reduce inflammation and pain
- Maintain 0° of knee extension

#### Phase II – Progressive Stretching and Early Strengthening

##### **Weeks 6 to 8**

- Discontinue brace

##### Goals

- Full knee extension/hyperextension
- Gradual progression to full knee flexion
- No swelling
- Normal gait

##### Exercise progression

- Continue to emphasize patella mobility
- Begin bilateral closed kinetic chain strengthening limited range initially
- Step-up progression
- Begin stationary bike with light resistance initially
- Proprioception drills



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## **Phase III – Advanced Strengthening and Proprioception**

### **Weeks 8 to 10**

#### Goals

- Full knee flexion and extension

#### Exercise progression

- Avoid rotational movements until 14 weeks
- Begin full gym strengthening program
- 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.)

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

#### Exercise progression

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

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