

# Megan R. Wolf, MD **Sports Medicine**

## ANTERIOR CRUCIATE LIGAMENT (ACL) RECONSTRUCTION WITH POSTEROLATERAL CORNER (PLC) RECONSTRUCTION AND MENISCUS REPAIR (RADIAL/ROOT)

Post-Operative Protocol

## Phase I - Maximum Protection

#### Weeks 0 to 3

- Brace 0-90 degrees for unloaded range of motion only
  - Recommend locking in extension during sleep
- Use two crutches NWB at all times for 6 weeks
- Limit knee flexion to 90-degrees for 3 weeks

#### Goals

- Reduce inflammation and pain
- 0 degrees of knee extension

## Exercise progression

- o Emphasize patellofemoral mobilizations
- Passive/active knee range of motion with 90° flexion limit 0
- Quadriceps setting emphasize VMO function
- Multi-plane straight leg raising
- o Open chain hip strengthening
- Gait training

#### Weeks 3 to 6

Limit knee flexion to 120 degrees

#### Goals

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

## Phase II - Progressive Stretching and Early Strengthening

## Weeks 6 to 8

- Brace open to 0-90 degrees for ambulation, does not have to sleep in brace
- Continue using two crutches, with gradual progression of weight bearing
  - Increase WB to FWB over next 2 weeks

## Goals

- o Full knee extension/hyperextension
- Gradual progression to full knee flexion
- No swelling
- o 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 0
- Proprioception drills

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#### Phase III - Advanced Strengthening and Proprioception

#### Weeks 8 to 10

Discontinue brace

#### Goals

Full knee flexion and extension

#### Exercise progression

- O Avoid rotational movements until 14 weeks
- o Begin full gym strengthening program
- Advance stationary biking program (increase intensity)
- o 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
- o Lunge progression (retro, walk and split) as indicated
- o Forward/backward elevated treadmill walking

#### Weeks 12 to 14:

Administer preliminary functional test for physician to review

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

#### Weeks 12 to 20:

## Exercise progression

- o Progress resistance with squat and lunge strengthening program
- o Begin light plyometric drills, progress from bilateral to unilateral
- o Begin linear jogging week 16
- o Progress to lateral and rotational stresses at 18 weeks
- Multi-directional drills at 18-20 weeks

## Phase V – Return to Sport

## Weeks 20 to 24:

#### Exercise progression

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

#### Criteria to be released for return to sport

- o 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

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