

# MACI<sup>®</sup> Rehabilitation Protocol\*- Dr Bokshan

## Phase 1 (0-4 weeks)

- PT EVAL 3-5 days post op
  - Remove surgical bandages and cover incisions with gauze + Tegaderm- OK to shower when covered
    - Exception: do not remove Aquacel bandages
- Weight Bearing
  - As tolerated, unless otherwise stated in Op Note
  - Brace locked in full extension
    - Unlock to 30 degrees with good quad activation
  - Assistive device for proper gait pattern and progressive WBAT
- ROM & Exercises
  - ROM (1-2 wks) 0-45 degrees, (3-4 wks) 0-90 degrees
    - Avoid pushing through pain
  - Patellar mobilization
  - Passive and active heel slides
  - Open Kinetic Chain (OKC) hip strengthening
  - Standing weight shift
  - Blood Flow Restriction (BRF) when stitches are removed

## Phase 2 (4-6 weeks)

- Weight Bearing
  - Continue to wean from assistive devices with proper gait pattern
  - Brace unlocked to 45 degrees or full range with good quad control
- ROM & Exercises
  - 0-125 degrees
  - Upright bike
  - Continue BFR (with closed incisions)
  - Option to add aquatic exercise once incisions are fully healed

## Phase 3 (6-8 weeks)

- Weight bearing
  - Brace unlocked to full knee flexion
  - Proper gait pattern without assistive device on solid surface
- ROM & Exercises
  - Full ROM without increased pain
  - OKC hamstring strengthening

\*Patellofemoral vs Tibiofemoral and # of defects can affect progression timeline. Reference MD Op Note and progress notes for patient-specific instructions.

MACI.com/pt-education

#### **Phase 4 (8-12 weeks)**

- ROM & Exercises
  - Progressive, Closed Kinetic Chain (CKC) strengthening
    - Step ups
    - Eccentric step downs 2-4”
    - Mini squats 0-45
    - Partial body weight leg press
    - Balance and proprioception exercises
  - (10 wks) OKC quad strengthening

#### **Phase 5 (12 weeks-6 months)**

- ROM & Exercises
  - Straight-line running with following goals met:
    - Dynamometer/Tindeq hip and knee strength 80% to contralateral LE
    - Demonstrates good single leg stability
  - (16 wks) Sport specific training & return to sport testing if the following goals are met:
    - Y balance test 90%
    - Dynamometer/Tindeq strength 90% to contralateral LE
    - Return to Sport Battery [www.conehealth.com/orthocare/resources/#rehab](http://www.conehealth.com/orthocare/resources/#rehab)

#### **Phase 6 (6+ months)**

- Progression based on return to sport needs
  - Monitor form and pain levels
  - Release to Tennis, Pickle Ball, Golf, ect. may be delayed as late as 9 months
  - Release to collision sports up to 10-12+ months

\*Patellofemoral vs Tibiofemoral and # of defects can affect progression timeline. Reference MD Op Note and progress notes for patient-specific instructions.

MACI.com/pt-education