



# INOVA<sup>®</sup>

## Sports Medicine

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### Physical Therapy Protocol Following Microfracture

**Weight Bearing Status – See below**

#### **Weight Bearing:**

- For FC lesions:
  - Small FC lesions (<2.0cm<sup>2</sup>)
    - Week 1-4: NWB
    - Week 4-6: Wean off crutches to FWB
  - Large FC lesions (>2.0cm<sup>2</sup>)
    - Week 1-6: NWB
    - Week 6-8: Wean off crutches to FWB
- For PF lesions:
  - Immediate TTWB of approx.. 25% of BW- brace locked in full extension
  - Week 2: progress to 50% WB- brace locked in full extension
  - Week 3: progress to 75% WB- brace locked in full extension
  - Week 4: progress to full WB- brace locked in full extension
  - Week 6-8: progress opening of brace to D/C brace

#### **Post-Op Weeks 0-8:**

Goals:

1. Minimize swelling and pain
2. Establish quadriceps control
3. Restore full passive knee extension, gradually improve passive flexion
4. Protect healing of articular cartilage.

Exercises:

1. Quad sets, SLR (4 directions), core strengthening program
2. Hamstring stretch, calf towel stretch, ankle pumps
3. Patellar mobilizations
4. At week 3: bicycle for ROM (NO resistance), heel raises
5. At week 6: Light hamstring curls

#### **Post-Op Weeks 8-12:**

Goals:

1. Gradually improve quadriceps strength/endurance
2. Gradually increase functional activities
3. Progress to full knee flexion by week 8
4. Control compression and shear forces

Exercises:

1. Mini-squats 0-45<sup>0</sup> at weeks 8-10
2. Progress balance and proprioception drills
3. Initiate front lunges, wall squats, front and lateral step ups
4. Week 10: pool running, treadmill walking (progress to incline), 1/3 double knee squats
5. Week 12: elliptical, rowing, double leg press, single knee squats, balance squats

### **Post-Op Months 3-4:**

Goals:

1. Improve muscular strength and endurance
2. Increase functional activities
3. Continue progression of balance and proprioception drills

Exercises:

1. Leg press 0-90<sup>0</sup>, bilateral squats 0-60<sup>0</sup>
2. Unilateral step-ups progression, forward lunges
3. Bilateral calf raises 25%-50% of body weight to 0<sup>0</sup> dorsiflexion (without boot)
4. Single leg squats 25%-50% of body weight to 0<sup>0</sup> dorsiflexion (with boot)

### **Post-Op Months 4-7:**

Goals:

1. Gradual return to full, unrestricted functional activities
2. Single leg hop test within 75-85% of contralateral extremity in order to progress jogging
3. 10 single leg hops with good form

Exercises:

1. Progress resistance as tolerated
2. Emphasis on entire LE strength and flexibility
3. Weeks 16-18: initiate PWB/aquatic plyometric and hopping activities
4. Weeks 18-20: progress double and single leg hopping
5. Progress agility and balance drills

### **Return to Functional Activities:**

- Low impact sports: swimming, skating, rollerblading and cycling are permitted at:
  - 2 months- small FC and PF lesions
  - 3 months- large FC lesions
- High impact sports: jogging, running and aerobics are permitted at:
  - 4-5 months- small lesions
  - 6 months- large lesions
- High impact sports: tennis, basketball, football and baseball are permitted at:
  - 6-8 months- small lesions
  - 9-12 months- large lesions

### **Criteria for release to sport(s):**

1. Physician clearance
2. Symmetry with functional testing
3. Able to perform all sport-specific drills without pain, effusion, or instability