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Physical therapy  
Microfracture – Femoral condyle  
Post Operative Protocol

## Phase I – Maximum Protection (0 to 3 weeks)

0-3 weeks:

- \* Ice and modalities to reduce pain and inflammation
- \* Use crutches non-weight bearing for 6 weeks
- \* Initiate patella mobility drills
- \* Begin full passive/active knee range of motion exercises
- \* Quadriceps setting focusing on VMO restoration
- \* Multi-plane open kinetic chain straight leg raising
- \* Gait training with crutches (NWB)

## Phase II – progressive Stretching and Early strengthening (weeks 3 to 6)

Week 3-6

- \* Continue non weight bearing
- \* Maintain program as outlined in weeks 0-3
- \* Continue with modalities to control inflammation
- \* Initiate global lower extremity stretching program
- \* Begin stationary bike and pool exercise program (when incisions healed)
- \* Implement reintegration exercises emphasizing core stability
- \* Closed kinetic chain multi-plane hip strengthening on uninvolved side
- \* Manual lower extremity PNF patterns
- \* Proprioception drill emphasizing neuromuscular control
- \* Multi-plane ankle strengthening

## Phase III – Strengthening and Proprioceptive Phase (Weeks 6-10)

- \* Modalities as needed
- \* Continue with Phase II exercises as indicated
- \* Begin partial weight bearing at 25% of body weight and increase by 25% approximately 3 days. May progress to one crutch at 7.5 weeks as tolerated, gradually wean off of crutches by week 8-9

Weeks 9 to 10

- \* Normalize gait pattern
- \* Advanced stationary bike program; begin treadmill walking and elliptical trainer; avoid running and impact activity

- \* Initiate Closed kinetic chain exercises progressing bilateral to unilateral
- \* Initiate proprioception training

#### Phase IV – Advanced Strengthening and Initiation of Plyometric Drills (Weeks 10 to 20):

##### Weeks 10 to 16:

- \* Initiate gym strengthening – beginning bilateral progressing to unilateral leg press, heel raises, hamstring curls, squats, lunges, knee extensions (30 ° to 0° progressing to full range as PF arthrokinematics normalize)

##### Weeks 16 to 20:

- \* Continue with advanced strengthening
- \* Begin functional cord program
- \* Begin pool running program progressing to land as tolerated

#### Phase V – return to Sport Functional Program (Weeks 20 to 24):

- \* Follow- up examination with physician for progression to this stage
- \* Implement sport specific multi-directional drills and bilateral plyometric activity progressing to unilateral as tolerated
- \* Continue with aggressive lower extremity strengthening, cardiovascular training and flexibility
- \* Sports test for return to play