**Patellofemoral Microfracture**

**Jeremy Mangion, MD**

This protocol was developed for patients who have had a microfracture of the patellofemoral compartment. The goal of this protocol is to advance range of motion and strength as directed while protecting the microfracture site to ensure optimal healing.

Patients will begin physical therapy after their first post operative visit with the physician. The dressing will have been removed and patients will have been utilizing a home exercise program.

Primary goals in the early weeks are to stress compliance with their home exercise program, reinforce restrictions, and prevent stiffness.

The protocol is divided into phases. Each phase is adaptable based on the individual

patient and special circumstances.

Phase I –Maximum Protection- Weeks 1-6:

Goals:

* Diminish inflammation and swelling
* Restore ROM
* Reestablish quadriceps muscle activity

Stage 1: Immediate Postoperative Day 1- Week 4

* **Weight-bearing as tolerated in locked brace.**
* Ice, compression, elevation
* Electrical muscle stimulation
* ROM Full
* Patellar mobilization
* Scar tissue mobilization
* Exercises:
	+ Quadriceps isometrics
	+ Hamstring isometrics
	+ Hip abduction and adduction
* CPM Machine

Stage 2: Weeks 4-6

* Weight-bearing as tolerated in locked brace
* Full ROM
* Begin pool exercises.
* Cycling (no resistance)
* Unloaded flexibility exercises

Phase II: Moderate Protection- Weeks 6-12

Criteria for progression to phase II:

* Full ROM
* No effusion
* Quadriceps control (MMT 4/5)

Goals:

* Increased strength, power, endurance
* Normalize gait out of brace.
* Prepare patients for advanced exercises

Exercises:

* Strength- closed chain exercises.
* Flexibility exercises
* Lateral step-ups
* Mini-squats
* Continue pool therapy

Endurance Program:

* Swimming, pool running- if available
* Cycling
* Stair machine

Coordination Program:

* Balance board
* Pool sprinting- if pool available
* Backward walking
* Plyometrics

Phase III: Advanced Phase- 3 Months

Criteria for progression to phase III:

* Full, pain free ROM
* No pain or tenderness
* Satisfactory clinical examination
* SLR without lag
* Normalized Gait

Goals:

* Increase power and endurance
* Emphasize return to skill activities
* Prepare for return to full unrestricted activities

Exercises:

* Continue all exercises
* Increase plyometrics, pool program
* Initiate running program

Return to Activity: Criteria

* Full, pain free ROM
* Satisfactory clinical examination

Criteria for discharge from skilled therapy:

1) Non-antalgic gait

2) Pain free /full ROM

3) LE strength at least 4/5

4) Independent with home program

5) Normal age appropriate balance and proprioception

6) Resolved palpable edema