



## Microfracture Rehab Protocol

### PHASE I (Surgery to 6 weeks)

#### **Appointments:**

Begin PT 7-10 days post op, meet about 1 time a week

#### **Rehab Goals:**

- Protection of post-surgical knee
- Restore normal knee ROM and patellar mobility
- Eliminate effusion
- Restore leg control

#### **Weight bearing (FEMORAL CONDYLE LESIONS):**

- Use axillary crutches, to follow the weight bearing guidelines below. This is essential for proper healing. For special situations and in winter month a brace may also be used
- Weeks 0-2 = NWB
- Weeks 2-6 = TDWB
- Weeks 6-8 = partial weightbearing

#### **Range of motion exercises:**

- Knee extension on a bolster
- Prone hangs
- Supine wall slides as tolerated without pain
- Passive ROM off the end of the table as tolerated without pain
- CPM machine
- Biking – use contralateral leg to create ipsilateral passive ROM

**NOTE: ROM exercises should be carried out frequently throughout the day with high repetitions to help remodel the developing fibrocartilage. The optimal goal during the first 6 weeks is to do 4-8 hours of ROM exercises per day.**

#### **Suggested Therapeutic exercises:**

- Quad sets
- Straight leg raises
- Four way leg lifts in standing with brace on for balance and hip strength
- Patellar mobilization

#### **Cardiovascular exercise:**

- Upper body circuit training or upper body ergometer

#### **Progression criteria to advance to PHASE II**

- 6 weeks post op
- No effusion
- Full knee extension

### PHASE II

#### **Rehab Goals:**

- Single leg stand control
- Normalize gait
- Good control and no pain with functional movements, including step up/down, squat, partial lunge (staying less than 60 of knee flexion)

**Precautions:**

- Avoid post-activity swelling
- Avoid loading knee at deep flexion angles
- No impact activities until 12 weeks post op

**Suggested Therapeutic exercises:**

- Non impact balance and proprioceptive drills
- Stationary bike
- Gait drills
- Hip and core strengthening
- Stretching for patient specific muscle imbalances
- Quad strengthening – closed chain exercises short of 60 knee flexion
- Continue pool program – alternating days with land program

**Cardiovascular exercise:**

- Non impact endurance training; stationary bike, Nordic track, swimming, deep water run, cross trainer

**Progression criteria to advance to PHASE II:**

- Normal gait on all surfaces
- Full ROM
- No effusion
- Ability to carry out functional movements without unloading affected leg or pain, while demonstrating good control
- Single leg balance greater than 15 seconds

## **PHASE III (about 3 months)**

**Rehab Goals:**

- Good control and no pain with sport and work specific movements, including impact

**Precautions:**

- Avoid post-activity swelling
- Avoid knee pain with impact
- Post activity soreness should resolve within 24 hours

**Suggested Therapeutic exercises:**

- Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to other and then 1 foot to same foot
- Movement control exercises beginning with low velocity, single plane activities and progressing to higher velocity, multi plane activities
- Sport/work specific balance and proprioceptive drills
- Hip and core strengthening
- Stretching for patient specific muscle imbalances

**Cardiovascular exercise:**

- Replicate sport or work specific energy demands

**Return to sport/work criteria:**

- Dynamic neuromuscular control with multi plane activities, without pain or swelling