



Microfracture Medium to Large Lesion Rehabilitation

Phase 1: Maximum Protection Phase (Weeks 1-4)

Goals: Control inflammation/effusion
Allow early healing
Full passive knee extension
Gradually increase knee flexion
Independent quad. Control

Stage 1: Week I

- Ice, compression, elevation
- Brace locked at 0 degrees for ambulation and sleeping only
 - Brace may be unlocked during sitting etc.
- ROM (Passive 0-90)
- Patellar mobilization
- Strengthening exercise:
 - Quad Sets
 - SLR flexion
 - Hip Abd/Adduction
- ***Non-Weight Bearing x 6 weeks***

Stage 2: Weeks 2-4

- Continue use of ice and compression
- Brace locked for ambulation
- ROM Guidelines
 - Gradually increase PROM
 - Week 2: 0-90 degrees
 - Week 3-6: 0-95 degrees
- Strengthening Exercises:
 - SLR (all 4 planes)
 - Knee Extension 90-0degrees
 - Heel Slides to 90

Phase 2: Moderate Protection Phase (6-8 weeks)

Goals: Full PROM
No Swelling/inflammation
Re-establish muscle control
Proper gait pattern

- Weight bearing guidelines-> Continue to lock brace
 - Week 6: 25-50% WB as tolerated with 2 crutches
 - Week 7-8: FWB unlock brace (Discontinue brace at 8 weeks)
- *Discontinue crutches when safe and proper gait (usually 7-8 weeks)

- Continue use of ice and compression
- Continue ROM and progress to 0-135 Degrees
- Progress strengthening exercises Phase I
 - Heel slides to full ROM
 - Long sit hamstring stretch
 - Knee extension 90-0 Degrees
 - Standing hamstring curls
- Begin Level Two agility
 - Cup walking
 - Planks
 - Bridging
 - Steamboats 4 way (involved leg down)
 - Ball roll: for, side and back (involved leg down)
 - Heel raises
- Light strengthening: Short range leg press, 4-Way hip, leg extension 90-45, Dead lifts
- Bicycle (as ROM permits)
- Pool Program

***Avoid** twisting, deep squatting, stooping, no lunges!!!
pivoting, running and deep squatting

Phase 3: Controlled Activity Phase (9-16)

Goals: Improve strength and endurance
Maintain Full ROM
Gradually increase applied stress

Week 9 -11

- Continue all strengthening exercises listed above
- Initiate Dynamic warm-up (no lunge)
- Initiate Form Stepping (progress from walk pace to fast step pace and no lunge)
- Initiate light resistive hamstring curls
- Toe calf raises
- Progress balance training
- Progress to Phase II strengthening program

Week 12 –week 15

- Continue Strengthening and stretching program
- Continue dynamic warm-up (now can include lunges)
- Form running: progress from fast pace walk to trot to jog pace (now include lunges)
- Initiate treadmill for endurance (3.5mph fast walk then progress to light jog at 14 weeks)
- Begin step ups and step downs



- Initiate pool running

Phase 4: Return to Activity Phase (4-6 month)

Goals: Improve strength and endurance
Prepare for unrestricted activities

Criteria to Progress to Phase 4

- Full non-painful ROM
- No pain or tenderness
- Satisfactory clinical exam

Exercises

- Continue and progress all strengthening exercises and stretching drills
- Initiate straight line running at 5 months
- Initiate controlled pivoting and cutting: 6 months
- Deep squatting permitted at 6 months
- Initiate controlled agility training: 6 months
- Initiate jumping program at 8 months: Ankle jumps, two-legged hop, two –legged jumps, single leg, etc...
- Gradually return to sport drills at : 9 months
- Non contact practice 8 months
- Full competition non contact sports 9 months
- Full competition full contact 10 to 12 months