

Robert Kollmorgen DO

## MICROFRACTURE TREATMENT OF ARTICULAR CARTILAGE DEFECTS (Patellofemoral)

*Revised August 2017*

### **Post-op Days 1 – 14**

Dressing – POD 1: Debulk dressing, TED Hose in place  
– POD 2: Change dressing, keep wound covered, continue TED Hose  
– POD 7-10: Sutures out, D/C TED Hose when effusion resolved  
Crutches: weight bearing as tolerated (WBAT), D/C when gait is normal  
– Brace 0-20 degrees x 6 weeks  
CPM – Speed and ROM to patient tolerance, begin with 0-45 (8hrs daily)  
AAROM, AROM as tolerated  
Passive extension with heel on bolster or prone hangs  
Patellar mobilization (teach patient)  
Calf pumping  
Short arc quads, 0-20 only, without resistance  
Standing Hamstring curls in parallel bars  
Straight legraise (SLR) x 4 with knee in brace  
Electrical stimulation in full extension with quad sets and SLR  
Stationary bicycle for ROM, seat adjusted high, no resistance

**No Resisted Closed Chain ex x 6 weeks**

**No Resisted Open Chain ex x 6 weeks**

### **Goals**

CPM or bicycle: 500 cycles or more per day the first week  
1000 cycles or more per day thereafter  
Full extension

### **Weeks 2 – 4**

Brace 0-20 degrees x 6 weeks  
Continue appropriate previous exercises  
Scar massage when incision healed  
D/C CPM once patient is independent with stationary bicycle  
AROM, AAROM as tolerated  
Co-contractions quads / Hamstring at 0, 30, 60, 90 degrees  
SLR x 4 on mat (no brace) – Add light weight below the knee if good quad control  
Pool therapy – Deep water (chest/shoulder) walking and ROM exercises  
– Water jogging floating upright in deep water  
Stretches – Hamstring, hip flexors, ITB  
BAPS, ball toss, body blade  
Forward, backward, lateral walking in parallel bars  
Double leg heel raises, progress to single leg

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### **Goals**

No extensor lag

No effusion

### **Weeks 4 – 6**

Brace locked at 0-20 degrees

Continue appropriate previous exercises

PROM, AROM, AAROM to regain full motion

Standing SLR x 4 with Theraband bilaterally

**Goal** – Full AROM

### **Weeks 6 – 8**

D/C brace

Continue appropriate previous exercises

Leg press with light weight

Mini squats, Wall squats

Hamstring curls – Carpet drags or rolling stool (closed chain)

Treadmill – Forwards and backwards walking

**Goal** – Normal gait

### **Weeks 8 – 12**

Continue appropriate previous exercises

Hamstring curl weight machine

Knee extension weight machine

Proprioceptive training – BAPS, ball toss, body blade

Fitter

Slide board

Forward, lateral and retro step downs

Stationary bike – Minimal resistance

Treadmill – Walking progression program

Elliptical trainer

Pool therapy – Waist deep water walking or slow jogging

Quad stretches

### **Goal**

No thigh atrophy

Walk 2 miles at 15 min/mile pace

### **Months 3 – 4**

Continue appropriate previous exercises with progressive resistance

Treadmill – Running progression program



Division of Orthopaedics

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Stairmaster

**Goal** – Run 2 miles at easy pace

**Months 4 – 6**

Continue appropriate previous exercises

Agility drills / Plyometrics

Sit-up progression

Progressive weight training program

Transition to home / gym program

**Goals**

Return to all activities at 6 months post-op

***No contact sports until 6 months post-op***