



PHYSICAL THERAPY SECTION  
WILLIAM BEAUMONT ARMY MEDICAL CENTER  
5005 N. PIEDRAS ST  
EL PASO, TEXAS 79920



## MICROFRACTURE TREATMENT OF ARTICULAR CARTILAGE DEFECTS (Tibiofemoral)

*Revised August 2008*

### 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: Toe touch weight bearing (TTWB) x 6wks, No Brace  
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 HS curls in parallel bars  
Straight leg raise (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

Crutches with TTWB 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 / HS 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  
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## **Goals**

No extensor lag  
No effusion

### **Weeks 4 – 6**

Crutches TTWB  
Continue appropriate previous exercises  
PROM, AROM, AAROM to regain full motion  
Standing SLR x 4 with Theraband (standing on uninvolved LE)

**Goal** – Full AROM

### **Weeks 6 – 8**

Weight bearing as tolerated (WBAT), D/C crutches when gait is normal  
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  
HS 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  
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  
Pass APFT at 6 months post-op

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

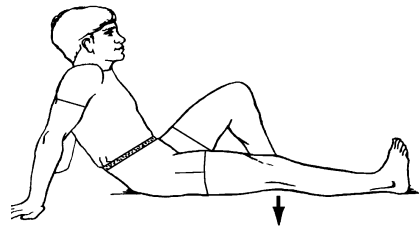
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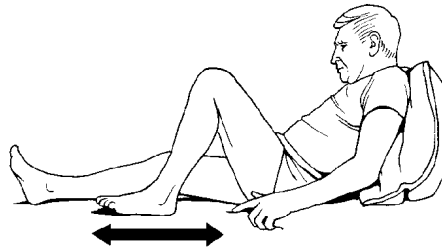
**Physical Therapy Clinic  
William Beaumont Army Medical Center  
El Paso, TX 79920**

**Knee Post Op Phase 1  
Perform exercises below frequently: 30 reps 3-5x a day**

**Quad Isometrics**



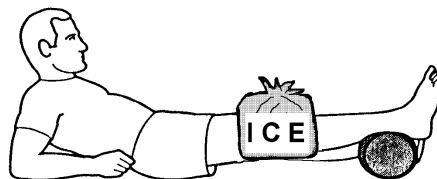
**Heel Slides**



**Active Assisted Motion**



**Ice Position 15 minutes 2-3 x per day**



Appointments?? Questions??

WBAMC PT: DSN:979-2181/1848 COMM: (915)569-2181/1848