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## **MICROFRACTURE TREATMENT OF ARTICULAR CARTILAGE DEFECTS (PATELLOFEMORAL) POST-SURGICAL REHABILITATION PROTOCOL**

### **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

### **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

#### **GOALS**

- 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

**GOAL**

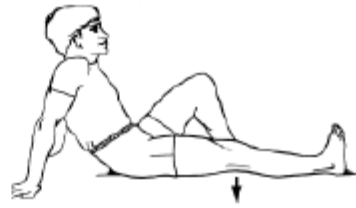
- Return to all activities

***\*NO CONTACT SPORTS UNTIL 6 MONTHS POST-OP\****

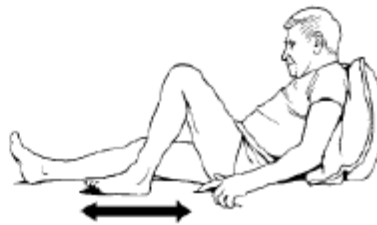
**KNEE POST-OP PHASE I**

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**



**ADAPTED FROM:**

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