GALLAND/KIRBY 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 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**

- **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

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**MONTHS 3 - 4**

• Continue appropriate previous exercises with progressive resistance
• Treadmill – Running progression program
• Stairmaster

**GOAL**

• Run 2 miles at easy pace

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**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

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*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