

University Orthopedics, Inc.
Sports Medicine Division

MICROFRACTURE TREATMENT OF ARTICULAR CARTILAGE DEFECTS** Tibiofemoral

PHASE I: ~0-2 Weeks Postoperative

GOALS:

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

AMBULATION AND BRACE USE:

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: TTWB x6 weeks, no brace

EXERCISE:

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
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

PHASE II: ~2-4 Weeks Postoperative

GOALS:

- No extensor lag
- No effusion

AMBULATION AND BRACE USE:

Crutches with TTWB x 6 weeks

EXERCISES:

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

PHASE III: ~4-6 Weeks Postoperative

GOAL:

- Full AROM

AMBULATION AND BRACE USE:

Crutches TTWB

EXERCISES:

Continue appropriate previous exercises
PROM, AROM, AAROM to regain full motion
Standing SLR x 4 with Theraband bilaterally

PHASE IV: ~6-8 Weeks Postoperative

GOAL:

- Normal gait

AMBULATION AND BRACE USE:

WBAT, D/C crutches when normal gait

EXERCISES:

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

PHASE V: ~8-12 Weeks Postoperative

GOAL:

- No thigh atrophy
- Walk 2 miles at 15 min/mile pace

EXERCISES:

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

PHASE VI: ~3-4 Months Postoperative

GOAL:

- Run 2 miles at easy pace

EXERCISES:

Continue appropriate previous exercises with
progressive resistance

Treadmill – Running progression program

Stairmaster

PHASE VII: ~4-6 Months Postoperative

GOALS:

- Return to all activities
- Pass APFT at 6 months post-op
- No contact sports until 6 months post-op

EXERCISES:

Continue appropriate previous exercises

Agility drills / Plyometrics

Sit-up progression

Progressive weight training program

Transition to home / gym program

**This protocol is designed to be administered by a licensed physical therapist and/or certified athletic trainer. Please do not hesitate to contact our office should you have any questions concerning the rehabilitation process.