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Postoperative Rehabilitation Guidelines Microfracture for Femur Lesion

The following protocol is intended as a general guideline for physical therapist, athletic trainer, and patient after microfracture for a Femur Lesion. These guidelines are designed to facilitate the expedited and safe return to athletic or professional activity and is based on a review of the current scientific principles of knee rehabilitation. For the treating health care provider this protocol should not serve as a substitute for individualized clinical decision making during the patient's post-operative course following microfracture for a Femur Lesion. It should rather take into consideration the individual's physical findings, progression, and possible post-operative limitations. If the therapist or patient requires assistance or encounters any postoperative complication they should consult with **your surgeon.**

Physical Therapy to start at one (1) week post-op.

Phase I : Weeks 0-2 (Clot Formation Phase)

- Lesions on Weight bearing part of bone
  - PWB with crutches 50% body weight for 2 weeks then WBAT
  - Small lesions may WBAT immediately (per MD script)

- CPM: start at 0-45 and advance as tolerated (use 6-8 hours/day for 8 weeks)
- Ankle pumps, SLR, isometric quad sets
  - Ok to use NMES to increase quad control
- Stationary bike without resistance at 2 weeks
- Hamstring curls, hip abductor/gastrocnemius strengthening
  - Monitor ROM
- Aggressive Cryotherapy

Phase II Weeks 3-16 (Load Progression Phase)

- Continue with all exercises from Phase 1
- D/C brace with good quad control at 8 wks.
- Restore full ROM (flexion and extension equal to contralateral side)
- Strengthening
  - Hamstring, hip abductor, gastroc/soleus strengthening
  - Well leg exercises
- Aquajogging, if available

- Bike at 8 weeks
- Elliptical when full weight bearing painfree
- Limited arc ROM until 16 weeks
- ICE PRN

Phase III Weeks 17-26 (Return to Activity Phase)

- Continue all exercises from Phase II
- Full ROM
- Strengthening
  - Progressive squatting/leg press program
    - Limit squatting <110 degrees with maximal body weight for 3 months after meniscal repair
    - Avoid squatting/leg press if with patellofemoral pain → resume isometric exercises
- Initiate impact exercises (jogging) at 4-5 months if no pain/effusion
- Bike, Elliptical for cardiovascular training
- Cryotherapy after every exercise session

If free of pain and effusion may advance to:

- Normalize strength, flexibility, endurance, and neuromuscular control
- Start plyometric drills at 4-5 months
- Progress running and agility program
- Initiate cutting, jumping drills at 5-6 months
- Advance sport-specific agility exercises
- Start sport-specific skill training at 6 months
- Continue sport-specific skill program and functional progression
- Gradual return to sport (MD directed)

Before Return to Sport:

- MRI evaluation
- Isokinetic testing (concentric) of hamstrings (goal 100%) and quadriceps (goal >90%)
- Single leg hop test (goal >90%)
- Complete functional knee scores (subjective scoring, ICRS, IKDC, Tegner, Lysholm, KOOS)

Please do not hesitate to contact the surgeon's office to discuss the individual patient's findings and progress at any time.