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ORTHOPAEDIC SURGERY
FRACTURES
JOINT REPLACEMENT
SPORTS MEDICINE

MICROFRACTURE PROTOCOL

The following protocol should be used as a guideline for rehabilitation progression, but may need to be altered pending the nature and extent of the surgical procedure, healing restraints or patient tolerance.

- Patient will be released from the hospital the same day as surgery
- Surgical dressing should be removed 2 days post op in physical therapy
- Strict protective weight bearing status for 2 months (approximately 8-9 weeks). TTWB for balance or otherwise determined by physician.
- Begin outpatient physical therapy 2-3 days post op.
- Emphasis on range of motion. Patient may perform active assisted range of motion as part of their home exercise program.
- Patient may start an aquatics program to initiate functional exercises in a reduced weight environment after the incisions have healed, approximately 3-4 weeks post-op.
- Emphasis on cycling for range of motion without resistance according to patient tolerance.
- At 2 months, transition to full weight bearing status (transition may vary on a case to case basis). Some patients may transition immediately to full weight bearing status. Others may require a transition to 1 crutch or continued support for long distances, which may be needed for 1-2 weeks.
- The rehab program will proceed cautiously for the first 3 months, after which functional progression will be determined by patient's tolerance to the exercises and general activity.

MICROFRACTURE PROTOCOL

PHASE 1: EARLY PHASE

Week 1

- Seated knee extensions
- Ankle pumps
- Pelvic tilts
- Trunk rotation
- Double leg bridges
- Prone on elbows
- Prone knee flexion
- Standing abduction without resistance

Week 2

Continue with previous exercises, but may add:

- Supine marching (modified dead bug)
- Superman
- Abduction isometrics
- Standing theraband resistance (start very low resistance) – abduction, adduction, flexion

Week 3

Continue with previous exercises, but may add:

- Seated physioball active hip and knee motions
- Active range of motion with gradual end range stretch within tolerance
- Sidelying hip adduction

Patient may progress to phase 2 when they have achieved the following: minimal pain with phase 1 exercises, minimal range of motion limitations, demonstrates restricted weight bearing during gait

PHASE 2: INTERMEDIATE PHASE

Weeks 4-6

Continue with previous or modified versions of previous exercises, but may add:

- Clamshells
- Progression of 4 way SLR table exercises

PHASE 3: ADVANCED PHASE

Week 7

Continue with previous or modified versions of previous exercises, but may add:

- Superman in quadruped position
- Clamshells with theraband resistance
- Standing theraband or multi-hip in flexion, abduction, adduction, and extension
- Aquatic exercises: flutter kick, swimming, 4 way hip exercises with water weights, step ups

Week 8

Continue with previous or modified versions of previous exercises, but may add:

- Partial squats
- Calf raises

Week 9

Continue with previous or modified versions of previous exercises, but may add:

- Sidestepping with resistance (pause on affected limb)
- Sports cord walking forward and backward (pause on affected limb)
- BOSU squats
- Knee extensions
- Hamstring curls
- Single stability ball bridges

Week 10

Continue with previous or modified versions of previous exercises, but may add:

- Step ups with eccentric lowering
- Lunges (progress from single plane → tri-planar lunges → add medicine balls for resistance and rotation)

PHASE 4: SPORTS SPECIFIC TRAINING CLINIC BASED PROGRESSION

Weeks 11-13

Continue with previous or modified versions of previous exercises, but may add:

- Pool running
- Treadmill jogging
- Step drills, quick feet step ups, forward, lateral carioca
- Plyometrics: double and single leg shuttle jumps
- Theraband walking patterns

FINAL PHASE: SPORT TRAINING ON THE FIELD OR COURT

Weeks 14+

Continue with previous or modified versions of previous exercises, but may add:

- Running progression
- Sport specific drills
- Traditional weight training

Criteria for full return to sport:

- **Full range of motion**
- **Hip strength equal to uninvolved side; single leg pick-up with level pelvis**
- **Ability to perform sport-specific drills at full speed without pain**
- **Completion of functional sports test**