



Protocol For Femoral Microfracture Follow This Protocol For Tibial Plateau Microfracture, But Patient Non-Weight Bearing.

The Microfracture technique is used in knees where there is a defect in the articular cartilage. These chondral injuries will progress to arthritic changes if left unaddressed.

During the operation the full thickness articular cartilage defect is identified and the exposed bone debrided. Multiple holes or 'microfractures' are made in the subchondral bone plate. A blood clot rich in marrow elements: 'super clot', forms over the lesion. This clot provides a rich medium in which cells can divide. These eventually form a repair cartilage that fills the original defect.

Patients should have CPM immediately after surgery from 30°-70° and then gradually increased over the next few hours. Pain is the guiding factor limiting ROM.

The primary goal is to regain full passive knee motion as soon as possible.

The patients should remain Touch weight bearing for 6-8 weeks.

Cold therapy can be used to help reduce pain and inflammation.

All exercises should be relatively comfortable to perform especially when moving on to weight bearing exercises.

Use symptoms of pain, swelling and giving way as indicators of when exercises can be progressed to next stage.

Exercises include

- Passive flexion and extension exercises including knee flexion in prone.
- Active range of movement exercises if comfortable.
- Static quads.
- Straight leg raise and in prone.
- Stretches for quads, hamstrings and achilles tendon.
- Mini squats with 80% of weight on unoperated leg.
- Single leg stationary cycling (well leg only).
- Hip extension / Add / Abd. Add resistance as tolerated.

Limited strength training can be done in this time period.

2 weeks

- Spinning on stationary bike 70-80 RPM.
- Hydrotherapy – kick board.

6-8 weeks

- Progress to partial weight bearing between 6-8 weeks.
- Theraband exercises can be started including squats and seated leg press.
- Open chain quads / hamstrings with resistance as tolerated.



Patient Information

8 weeks

- Full weight bearing if comfortable.
- Gradually increase difficulty of all weight bearing exercises.

4-6 months

- Earliest return to sports that involve pivoting, cutting and jumping.

References:

Steadman, JR, MD, Rodkey, WG, DVM, Singleton, SB, MD, Briggs, KK, MBA: Microfracture Technique for Full-Thickness Chondral Defects: Technique and Clinical Results: Operative Techniques in Orthopaedics. Vol 7, No.4 (October), 1997: pp300-304

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