South County Orthopedics

Orthopedics & Sports Medicine • Physical Therapy • Sports Performance

Microfracture Rehabilitation

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The goal of microfracture rehabilition is to create an ideal physical environment combined with the ideal chemical environment produced by the marrow clot so that a repair cartilage can develop that fill the original defect. These are basic guidelines and parameters to the rehabilition program can be modified based on the location of the defect, the size of the defect, and whether any other surgical procedures were done at the time of microfracture.

Chondral Defects on the Femur or Tibia:

- Begin passive flexion/extension of the knee immediately with 500 repetitions three times a day.
- Touch-down weight bearing of the involved leg with use of crutches for 6-8 weeks. This is dependent on size of defect.
- No brace use indicated.
- Limited strength training begins immediately after surgery
    - Standing one-third knee bends with the uninjured leg supporting much of the weight to begin day after surgery
    - Stationary bike without resistance to begin 1-2 weeks after surgery
    - After 8 weeks, progress to full weight bearing and begin more aggressive program of active knee motion
    - Elastic resistance cord exercises can begin at 8 weeks
    - Free weights or machine weights can begin no sooner than 16 weeks
- Patients must not resume sports that involve pivoting, cutting, and jumping for 4-6 months after microfracture procedure.
- Full Activity may be resumed once the physician has examined the knee and given approval for the patient to return to sports activity.

Chondral Defects on the Patella or Trochlea:

- Must wear brace set for 0°-20° of flexion for 8 weeks. Compression of the new surfaces must be limited in the early postoperative period so that the maturing marrow clot will not be disturbed. Brace is on at all times except when passive motion is allowed.

- Begin passive flexion/extension of the knee immediately with 500 repetitions three times a day during those periods when brace is removed. Goal is to obtain pain-free and full passive range of motion soon after surgery.

- When the patient wears a brace, strength training is allowed, but only in the 0°-20° range immediately after surgery in order to limit compression of the affected chondral surfaces. The joint angles are observed carefully at the time of surgery to determine where the defect makes contact with the opposing surface , either on the patella or trochlea so that these areas can be avoided during strength training for approximately 4 months.

- Patients are allowed to put weight on the involved leg as tolerated, but it must be limited to the angles of flexion that do not compress the treated surfaces. Therefore, the patient must wear the brace locked in limited flexion.

- At 8 weeks, the brace is gradually opened to allow increased flexion of the knee. Full flexion is achieved over the course of 4 weeks. Brace is discontinued at 12 weeks.

- Strength training advances progressively after brace is discontinued.

- The doctor must examine the knee prior to the patient being released to full activity.

This protocol provides you with general guidelines for the patient undergoing a microfracture.

Specific changes in the program will be made by the physician as appropriate for the individual patient.

Questions regarding the progress of any specific patient are encouraged, and should be directed to Dr. Tabaddor at 401-789-1422, ext. 104.

REFERENCE: Clinical Orthopaedic Rehabilitation, 2nd edition. SB Brotzman, KE Wilk. Mosby 2003.