



## **Distal Femoral Osteotomy (DFO) With OATS Allograft and Meniscal Allograft Transplant**

Ryan W. Hess, MD

Dr. Hess Care Coordinator Phone: 763-302-2223

Fax: 763-302-2401

- **Phase I – Immediate Post-Surgical Phase (Week 0-2)**
  - Goals:
    - Protection of post-surgical knee
    - Gradually increase ROM
    - Decrease pain and inflammation
    - Prevent muscular inhibition
    - Restore leg control
  - Cryotherapy for pain/inflammation
    - Ice 15-20 minutes every hour
  - Sleeping
    - Sleep in brace
  - Weight Bearing (may be modified in certain situations)
    - Femoral condyle lesions
      - TTWB (rest foot on ground)
  - Brace
    - Hinged brace locked in extension at all times
    - Remove for CPM and exercises only (and hygiene)
  - ROM
    - Prone hangs
    - Knee extension on a bolster
    - Supine wall slides
    - PROM 0-90 degrees
    - CPM machine 6 hrs/day, beginning at 0-40 degrees, progressing 5-10 degrees per day as tolerated
  - Muscle Retraining
    - Quadriceps isometrics, SLR
  - Patellar mobilizations
  - Note: ROM exercises should be carried out frequently throughout the day with several repetitions in order to remodel the developing/healing knee cartilage. The goal for the first 6 weeks is 4-8 hours of ROM exercises per day

- Phase II – Protection Phase (Week 2-6)

- Goals
  - Allow healing of soft tissue/bone
  - Do not overstress healing tissue
  - Gradually increase ROM
    - Progression based on swelling/inflammation and guidelines below
  - Decrease pain and inflammation
- Brace
  - Typically discontinue brace after 6 week visit
- Weight bearing
  - Femoral condyle lesions
    - TTWB until 6 weeks
- ROM guidelines
  - Exercises as above
  - CPM continue to advance as above
    - 6 hrs/day, 0-90 degrees
  - PROM/AAROM to tolerance
  - Caution with flexion >90 degrees to protect posterior horn of meniscus transplant
- E-stim to quads
- Quad isometrics
- SLR

- Phase III – Intermediate Phase (Week 6-12)

- DO NOT begin intermediate phase until cleared by Dr. Hess (usually with radiographic healing of osteotomy)
- Goals
  - Gradual improvement in ROM
  - Eliminate swelling
  - Normalize gait
- Criteria to progress to Phase III
  - 6 weeks post-op
  - No effusion
  - Full extension
  - Healed osteotomy
- Precautions
  - Avoid post-activity swelling
  - Avoid loading knee at deep flexion angles
  - No impact activities until 12 weeks post-op
- Weight bearing
  - Advance 25% weekly until FWB

- ROM
    - Full motion as tolerated
    - CPM
      - Continue through week 8
  - Continue quadriceps strengthening
  - Continue above exercises
  - Gait drills
  - Stationary bicycle at 8 weeks
  - Hip/core strengthening
  - Closed chain quad exercises at <60 degrees flexion
- Phase IV –Strengthening Phase (Week 12-20+)
    - Goals
      - Maintain full ROM
      - Improve limb strength and endurance
      - Gradual return to functional activities
    - Criteria to progress to Phase IV
      - Full, non-painful ROM
      - Absence of swelling/inflammation
      - Good control of affected limb
      - Normal gait on all surfaces
      - Single-leg balance >15 seconds
    - Precautions
      - Post-activity soreness should resolve in <24 hours
      - Avoid knee pain with impact
    - Continue above exercises
    - Movement control exercises
      - Begin with single plane activities and progress
    - Sport specific activities when cleared by Dr. Hess
      - Typically 6-9 months