

# CHONDRAL DRILLING

## Ultimate Goal of Program

1. Improve Functional Status
2. Allow for maximal healing
3. Normalize Biomechanical Forces
4. Improve Strength/Power/Endurance
5. Decrease Pain/Inflammatory Status

## Weeks 1-3

### Goals:

1. Relieve pain and swelling
  2. Achieve full knee extension
  3. Decrease inflammation
  4. Retard muscle atrophy
  5. Maintain/increase flexibility
- NWB/TTWB for three weeks
  - Ice, Compression, Elevation
  - ROM Exercises
    - Heel slides to tolerance unless otherwise indicated by physician
    - Prone knee hang and/or supine knee hang for full knee extension
  - Strengthening exercises
    - Quadriceps isometrics
    - Isotonic short arc quad exercises, non-painful ROM
    - Straight leg raises (four planes of motion)
      - Hip abduction, hip flexion stressed
      - Hip abduction not done with lateral compression syndrome
  - Electrical Stimulation (EMS, TNS, HVGD, Biofeedback)
  - Flexibility
    - LE stretches (especially hamstrings, gastrocnemius, ITB)
  - Brace when indicated
  - Stationary bike for ROM, no resistance (must be at least one week post-op)
  - Patient education regarding activities, pathomechanics, weight bearing
  - **Avoidance Program**
    - Closed kinetic chain activities

## Weeks 4-5

### Goals:

1. Increase muscle strength without exacerbation
  2. Achieve full knee range of motion
  3. Initiate PWB gait with proper biomechanics
- Advance weights for SLR
  - Initiate PWB with crutches

- Progress to one crutch and possibly FWB in week 5 provided that pain is minimal, quad recruitment is adequate and patient can demonstrate proper biomechanics of gait (no extension lag).
- Continue isotonic short arc quad exercises, add weight if tolerated
- Bicycle (light to mild resistance)
- Initiate light resistance CKC exercises as tolerated
  - leg press machine
  - theraband leg press
  - shuttle leg press and calf raises
- Swimming, pool program for walking/running (if available)
- Continue isometrics and “knee hangs” if necessary
- Continue flexibility exercises
- Continue ice therapy, anti-inflammatory drugs
- Avoidance program
  - FWB activities

## **Weeks 6-8**

Goals:

1. Maximize strength
  2. Achieve normal gait, eliminate antalgic gait pattern
- Initiate FWB without assistive device, promote normal biomechanics
  - Initiate FWB activities as tolerated
    - Forward and lateral step-ups
    - Mini-squats
  - Continue isotonic weight training (blocking painful ROM)
  - Initiate proprioceptive and balance exercises
    - Unilateral balance
    - Contrakicks
  - Progress CKC exercises (leg press, shuttle)
  - Emphasis on increased functional activities
  - Ice therapy post exercise
  - Avoidance program
    - Full Squatting
    - Kneeling
    - Lunging
    - Painful ADL's

## **Maintenance Program**

Goal:

1. Continue strengthening without compromising surgery
  2. Discharge patient to HEP
- Continue flexibility daily (part of warm-up and cool down)
  - Continue PRE program 3 times per week for 1-2 months following surgery (consider independent gym program at your facility for supervision)
  - Endurance training is continued (Bike, elliptical, treadmill walking)

- Continue to be active (walking, swimming, pool running, biking)

### **Return to Activity**

Goal:

1. Gradually increase functional activities and gradually return athlete to sport
  - Patient may begin jogging at 4 months post-op
  - Patient may resume advanced recreational sports activities (tennis, soccer, etc.) at 6 months post-op unless physician recommends otherwise