

**Brian Forsythe, M.D.**  
Sports Medicine  
Shoulder, Elbow, Knee Arthroscopy  
Shoulder Replacement Surgery



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## **DISCHARGE INSTRUCTIONS & PHYSICAL THERAPY PROTOCOL: Distal Femoral/High Tibial Osteotomy**

- ❖ Recovery after knee surgery entails controlling swelling and discomfort, healing, return of range-of-motion of the knee joint, regaining strength in the muscles around the knee joint, and a gradual return to activities. The following instructions are intended as a guide to help you achieve these individual goals and recover as quickly as possible after your knee surgery.
  
  - ❖ **COMFORT**
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- **Elevation**
    - Elevate your knee and ankle above the level of your heart. The best position is lying down with two pillows lengthwise under your entire leg. This should be done for the first several days after surgery.
  - **Cold Therapy**
    - If you elected to receive the **circulating cooling device**, this can be used continuously for the first 3 days, (while the initial post-op dressing is on). After 3 days, the cooling device should be applied 3 times a day for 20-30 minute intervals.
    - If you elected to receive the **gel wrap**, this may be applied for 20 minutes on, 20 minutes off as needed. You may apply this over the post-op dressing. Once the dressing is removed, be sure to place a barrier (shirt, towel, cloth, etc.) between your skin and the gel wrap.
    - If you elected to use **regular ice**, this may be applied for 20 minutes on, 20 minutes off as needed. You may apply this over the post-op dressing. Once the dressing is removed, be sure to place a barrier (shirt, towel, cloth, etc.) between your skin and the ice.
  - **Medication**
    - **Pain Medication-** Take medications as prescribed, but only as often as necessary. Avoid alcohol and driving if you are taking pain medication.
      - You have been provided a narcotic prescription postoperatively. Use this medication sparingly for moderate to severe pain.
      - **You are allowed two (2) refills of your narcotic prescription if necessary.**

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- When refilling pain medication, weaning down to a lower potency or non-narcotic prescription is recommended as soon as possible.
- Extra strength Tylenol may be used for mild pain.
- Over the counter anti-inflammatories (Ibuprofen, Aleve, Motrin, etc.) should be **avoided** for the first 4 weeks following surgery.
- **Anti-coagulation medication:** A medication to prevent post-operative blood clots has been prescribed (Aspirin, Lovenox, etc.) This is the only medication that MUST be taken as prescribed until directed to stop by Dr. Forsythe.
- **Nausea Medication** – Zofran (Odansetron) has been prescribed for nausea. You may take this as needed per the prescription instructions.
- **Constipation Medication** - Colace has been prescribed for constipation. Both your pain medication and the anesthesia can cause constipation. Take this as needed.

## ❖ ACTIVITIES

- **Range-of-Motion** – Move your knee through range of motion as tolerated. This must be done while sitting or lying down. .
  - **Locking Knee Brace** – The brace is to be worn for up to 4-6 weeks following surgery. It will be locked straight until bone healing and good knee strength have been achieved (usually 5-6 weeks after surgery). At that time your doctor will determine if your leg has enough strength to allow your brace to be unlocked. You may unlock the brace while sitting but lock the brace before standing. Sleep with the brace on until directed by Dr. Forsythe.
  - **Exercises** – These help prevent complications such as blood clotting in your legs. Point and flex your foot and wiggle your toes. Thigh muscle tightening exercises should begin the day of surgery and should be done for 10 to 15 minutes, 3 times a day, for the first few weeks after surgery.
  - **CPM** – (Continuous Passive Motion Machine) – A Continuous Passive Motion (CPM) machine may be started the day **after** your surgery. This machine will be set at 30°. Motion on the machine should be increased 10-15° per week to a maximum of 90° in one month. The machine should be used 6 hours per day (i.e. 2 hours in the morning, 2 hours in the afternoon and 2 hours in the evening). Use of the machine will continue for 1-2 weeks, or until maximum flexion of the machine is reached (110°).
- DO NOT WEAR BRACE OR COOLING DEVICE WHILE USING CPM MACHINE**
- **Weightbearing** – You are allowed to put partial weight on your operative leg with only your toe touching the ground. Keep your brace locked in a straight position. Walk using

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- two crutches or a walker. You may touch your foot on the floor for balance. Do this within the limits of pain. Weightbearing is limited for 6 weeks post op.
- **Physical Therapy** – PT is usually started 1-2 weeks after surgery. You should call the physical therapist of your choice for an appointment as soon as possible after surgery. A prescription for physical therapy, along with physical therapy instructions (included in this packet) must be taken to the therapist at your first visit.
  - **Athletic Activities** – Athletic activities, such as swimming, bicycling, jogging, running and stop-and-go sports, **should be avoided** until allowed by your doctor.
  - **Return to Work** – Return to work as soon as possible. Your ability to work depends on a number of factors – your level of discomfort and how much demand your job puts on your knees. If you have any questions, please call your doctor.
  - **Driving**
    - **Right knee surgery:** Driving is NOT permitted for the first 6 weeks following right knee surgery.
    - **Left knee surgery:** Driving is allowed when approved by Dr. Forsythe.

#### ❖ WOUND CARE

- **Bathing** - Tub bathing, swimming, and soaking of the knee **should be avoided** until allowed by your doctor - Usually 4-6 weeks after your surgery. Keep the dressing on, clean and dry for the first 3 days after surgery.
  - You may shower 5 days after surgery with WATERPROOF band-aids on. Apply new band-aids after showering.
- **Dressings** - Remove the dressing 3 days after surgery. Your stitches will be left in until about 1-2 weeks post-op. They will be removed at your post op visit. You may apply band-aids to the small incisions around your knee and cover your larger incision with sterile gauze. Incision sites should be kept clean and dry.

#### ❖ EATING

- Your first few meals, after surgery, should include light, easily digestible foods and plenty of liquids, since some people experience slight nausea as a temporary reaction to anesthesia.

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❖ CALL YOUR PHYSICIAN IF:

- Pain in your knee persists or worsens in the first few days after surgery.
- Excessive redness or drainage of cloudy or bloody material from the wounds (Clear red tinted fluid and some mild drainage should be expected). Drainage of any kind 5 days after surgery should be reported to the doctor.
- You have a temperature elevation greater than 101°
- You have pain, swelling or redness in your calf.
- You have numbness or weakness in your leg or foot.

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❖ RETURN TO THE OFFICE

- Your first return to our office should be within the first 1-2 weeks after your surgery. You can find your appointment for this first post-operative visit in the post op instruction folder.

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## **REHABILITATION PROGRAM: Distal Femoral/High Tibial Osteotomy**

**NOTE:** The following instructions are intended for your physical therapist and should be brought to your first physical therapy visit.

*The intent of this protocol is to provide the therapist with guidelines of the post-operative rehabilitation course after a Distal Femoral or High Tibial Osteotomy. It should not be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam findings, individual progress, and/or the presence of post-operative complications. The therapist should consult the referring physician with any questions or concerns.*

### **PHASE I (0-4 weeks)**

#### **Goals:**

- Protect fixation and surrounding soft tissue.
- Control inflammation
- Minimize adverse effects of immobilization through CPM device and heel slides 0-90 degrees of flexion

**Brace:** Locked in full extension aside from CPM and physical therapy

**Weight Bearing:** Toe touch with two crutches

#### **Therapeutic Exercise**

- Quad sets
- Ankle pumps
- Heel slides 0-90 degrees of flexion
- CPM for 2 hours day 0-90 degrees of flexion
- Non-weight-bearing calf, hamstring stretches
- SLR in four planes with brace
- Resisted plantar flexion with theraband

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## **PHASE II (4- 6 weeks)**

### **Criteria to advance**

- Good quad set
- Approximately 90 degrees of flexion
- No signs of active inflammation

### **Goals**

- Increase range of motion
- Avoid overstressing fixation
- Increase quadriceps strength

**Brace:** Unlocked for ambulation

**Weight Bearing Status:** Toe touch, begin progression as tolerated at 5-6 weeks per Dr. Forsythe's instruction.

### **Therapeutic Exercise**

- Continue range of motion exercises progressing towards full flexion
- Discontinue CPM once 90 degrees attained
- Initiate aquatic therapy if available
- Remove brace for SLR, must be able to maintain full extension
- Initiate stationary bike, low resistance

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## **PHASE III (6 weeks - 3 months)**

### **Criteria to advance**

- Good quadriceps tone and no extension lag with SLR
- Full extension
- Flexion 90-100 degrees

**Brace:** Discontinue at 6 weeks unless otherwise directed

**Weight bearing status:** Increase by 25% of body weight every week for 4 weeks. Will be full weight bearing at the end of 4<sup>th</sup> week (week 10)

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### **Therapeutic Exercise**

- Mini-squats 0-45 degrees, progressing to step-ups
- 4 way hip for flexion, extension, adduction, abduction
- Stationary bike with moderate resistance
- Leg press 0-60 degrees of flexion. Closed chain kinetic chain terminal knee extension with resistive tubing/weights
- Toe raises
- Balance exercises
- Hamstring curls

### **PHASE IV (3-9 months)**

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#### **Criteria for advancement**

- Good –Normal quadriceps tone
- No soft tissue complaints
- Normal gait pattern

#### **Goals**

- Continued improvements in quadriceps strength
- Improve functional strength and proprioception
- Return to modified activities

#### **Therapeutic Exercise**

- Progression of closed kinetic chain activities
- Treadmill walking
- Swimming
- Jogging
- Sport-specific activities