



Green Bay • Fox Valley • Marinette

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## Physical Therapy Protocol: Distal Femoral Osteotomy

### Philosophy:

A distal femoral osteotomy is useful in limb re-alignment and involves severing the bone with subsequent repair using pins, plates or rods. The subsequent bone cuts require healing and must be protected during that period. The program for physical rehabilitation following distal femoral osteotomy is designed to be protective during the early stages, then advance flexibility and strengthening once the cut bone ends are healed. Ultimately, the goal is for the patient to go back to doing what they enjoy. Even when the formal rehabilitation program comes to an end, keeping the limb strong and stable takes a lifelong commitment. It may take a year or more of steady exercise to regain the full use of the leg.

### *Phase I, Post-Op 0-6 Weeks*

#### **OSMS appointments:**

MD visit at 2 & 6 weeks with post-op film

Physical therapy will begin as directed by your physician and as indicated on your physical therapy order

#### **Rehabilitation Goals:**

Toe-touch weight-bearing in locked brace at 0

Post-op brace is worn for 2 weeks locked in extension while ambulating and sleeping. This will protect the osteotomy during early healing

Maintain full extension, and then progress to flexion

Reduce swelling using cryocuff.

#### **Precautions:**

ROM exercises are 0-90 while supine

OK to progress in flexibility and with modalities as long as non-weight bearing

After 2 weeks, switch to daytime bracing only (off at night)

#### **Range-of-Motion Exercises:**

ROM is 0-90 while supine

After 2 weeks, ok to progress past 90

#### **Suggested Therapeutic Exercises:**

Toe touch weight-bear as tolerated with two crutches for 6 weeks

Calf pumps

Patellar mobilization 5-10 minutes a day for 6 months.

Isometric quad sets with knee at 0° of flexion. Three sets of 10, holding for ten seconds



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Straight leg raises in the locked post-op brace. Three sets of 10, 3 times a day.

**Cardiovascular Exercises:**

UE ergometer

Floor based core and glute exercises

**Progression Criteria:**

Patient may progress to phase II after 6 weeks if they have pain well-controlled

## ***Phase II, Post-Op 6-8 Weeks***

**OSMS appointments:**

MD appointment at 6 weeks

Physical therapy appointments remain every 5-7 days

**Rehabilitation Goals:**

TWB to 25% WB with crutches and advance weekly

Discontinuation of brace

**Precautions:**

Avoid open chain exercises

**Range-of-Motion Exercises:**

Full

**Suggested Therapeutic Exercises:**

Closed chain quadriceps exercises

Progressive balance and core/pelvis stability

Advance SLRs

Advance floor-based exercises

**Cardiovascular Exercises:**

Stationary bike

Core strengthening

**Progression Criteria:**

Patient may progress to phase II after 8 weeks if they have pain well-controlled

Progressive quadriceps control

## ***Phase III, Post-Op 8-16 Weeks***



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**OSMS appointments:**

MD appointment at 12 weeks

Physical therapy appointments every 5-7 days, and progresses to home program

**Rehabilitation Goals:**

Dual limb, then single limb control

**Precautions:**

None

**Suggested Therapeutic Exercises:**

Progression of functional balance

Core and glute strengthening

Flexibility

**Cardiovascular Exercises:**

Stationary bike, elliptical and ok to begin swimming

**Progression Criteria:**

Patient should be pain-free with minimal swelling

Independent non-antalgic gait

## ***Phase IV, Post-Op 16+ Weeks***

**Rehabilitation Goals:**

Progress to functional training

Continue LE strengthening, flexibility, proprioceptive and agility programs

Floor beam (if applicable)

After 20 weeks, ok to initiate agility drills & cutting activities (plyometric program allowed)

Advance agility and sport-specific programming

Maintenance exercise program