KJ Hippensteel, M.D., FAAOS
Sports Medicine
OrthoArizona
P: (602) 795-6300 ext 3174

Femur Intramedullary Nailing for Femur Fracture Post-Operative Guidelines

The following outlines the postoperative rehabilitation protocol after intramedullary nailing of a femur fracture (intertrochanteric, shaft, distal metaphyseal). Every patient is different, so the time points are just guidelines – the emphasis should be on achieving the milestones of each phase prior to advancing to the next phase. If other concomitant procedures were performed, please reference those additional protocols as well to create a patient-specific program. Please feel free to communicate with our office with any questions or concerns.

RED FLAGS FOR DELAYED/ NONUNION RISK AND/OR SLOWED PROGRESSION THROUGH THE PROTOCOL:

- **High energy mechanism.**
- **Open fracture.**
- **Previous bisphosphonate use**
    - **Especially if presenting as stress fracture of subtrochanteric femur**
- **Tobacco use.**

Immediate Post-Operative Care (Weeks 0-1)

Phase 1 PT/OT (Protect Repair, Optimize mobility, Minimize Deconditioning):

- Midshaft fracture: Weight bearing as tolerated with assistive device until gait normalizes
- Subtrochanteric or distal 1/3 shaft fracture: Flat-foot WB (20 lbs.) with assistive device.
    - If patient unable to adhere to/ comprehend limitations, then bed-chair transfers only.
- Isometric quadricep strengthening, VMO emphasis.
- Up with assistance only. Progress to independent mobility as tolerated.
- Fall prevention and gait training with assistive device.
- AROM/ PROM of hip (supine) and knee (sitting).
- ADLs

D/C Planning: Social work consult on DOS.
Discharge planning: uneventful, medically stable patient discharge on POD 2.
Follow-up at POD 10-14.

KJ Hippensteel, M.D., FAAOS
Sports Medicine
OrthoArizona
P: (602) 795-6300 ext 3174

Femur Intramedullary Nailing for Femur Fracture Post-Operative Guidelines

Weeks 1-8 Post-Operative

PRECAUTIONS

• Midshaft fracture: Weight bearing as tolerated with assistive device until gait normalizes
  • Subtrochanteric or distal 1/3 shaft fracture: Flat-foot WB (20 lbs.) with assistive device.
    - If patient unable to adhere to/ comprehend limitations, then bed-chair transfers only.

• **Outpatient vs. home health therapy (Phase 1)**
  - **1-2x/ week x 6 weeks**

• Gait training with assistive device
• Modalities prn
• Isometric quadricep and abductor exercise
• Fall prevention
• AROM/ PROM of knee while sitting at side of bed

• Advance to independent program when patient able to do all exercises reliably without pain.

• **Nursing home orders**: Continue gait training with assistive device. WB precautions as above. Isometric quadricep strengthening, VMO emphasis. Emphasize ADLs. Discharge okay from orthopedic standpoint when safety/ mobility/ ADL parameters aremet per PT/OT. Fall prevention screening for home environment before discharge.

• **Expected Return to Work:**

- Cognitive/ Sedentary: 9-10 weeks but may return to light duty (desk-work) sooner
- Medium Labor: 3 months
- Heavy Labor: 4-6 months.

KJ Hippensteel, M.D., FAAOS
Sports Medicine
OrthoArizona
P: (602) 795-6300 ext 3174

Femur Intramedullary Nailing for Femur Fracture Post-Operative Guidelines

Weeks 8-12 Post-Operative

PRECAUTIONS
• Weight bearing as tolerated for all fractures
- Subtrochanteric and distal 1/3 fractures – confirm adequate healing on radiographs at 8 week follow-up appointment before advancing weight bearing restrictions.

TREATMENT RECOMMENDATIONS (Regain Ambulatory Status)
- PT 1-2x / week x 6 weeks
- Abductor/ adductor stretching and strengthening.
- Quadriceps strengthening, VMO emphasis.
- Wean from assistive devices as tolerated
- For working-age patients, advance to work conditioning program when patient is able to walk without assistance or pain.
- Modalities prn

• HEP. Transition to pure HEP when pt. can perform all exercises with 80% of contralateral strength, no substitution patterns, and no pain.

Weeks 12+ Post-Operative

PRECAUTIONS
• Weight bearing as tolerated for all fractures

TREATMENT RECOMMENDATIONS (Regain Ambulatory Status)
- PT 1-2x / week until able to transition to HEP
- Abductor/ adductor stretching and strengthening- advance from prior
- Quadriceps strengthening, VMO emphasis
- For working-age patients, advance to work conditioning program when patient is able to walk without assistance or pain.
- Modalities prn