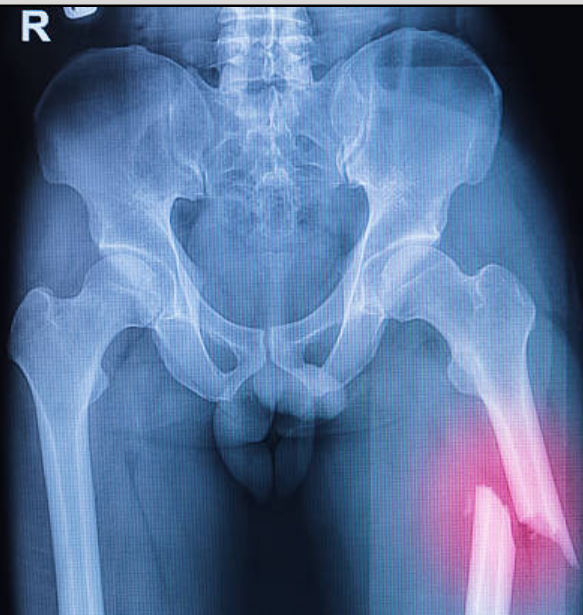


# Clinical Practice Guideline Overview

## Treatment of Pediatric Diaphyseal Femur Fractures

Published December 5, 2020

This clinical practice guideline addresses the treatment of isolated diaphyseal femur fractures in children where children are defined as those not having reached skeletal maturity.



### Literature Review

1,959  
abstracts reviewed



395  
articles recalled  
for full review



37  
articles included  
after full text review and  
quality analysis



### Treatment Recommendations



**Strong evidence** supports that children younger than thirty-six months with a diaphyseal femur fracture be evaluated for child abuse.



**Moderate evidence** supports early spica casting or traction with delayed spica casting for children aged six months to five years with a diaphyseal femur fracture with less than 2 cm. of shortening.



**Limited evidence** supports treatment with a Pavlik harness or a spica cast for infants six months and younger with a diaphyseal femur fracture, because their outcomes are similar.



**Limited evidence** supports rigid trochanteric entry nailing, submuscular plating, and flexible intramedullary nailing as treatment options for children aged eleven years to skeletal maturity diagnosed with diaphyseal femur fractures, but piriformis or near piriformis entry rigid nailing are not treatment options.



**Limited evidence** supports regional pain management for patient comfort peri-operatively.

#### Overview of 2020 Updates to the 2009 Original Guideline

- Addition of Siddiqui, et al, 2008 study findings to the Early or Delayed Spica Casting recommendation.
- The Elastic Intramedullary Nails recommendation strength was updated from limited evidence to strong evidence due to the additions of the Ahmad, et al, 2015, Naseem, et al, 2015, and Soleimanpour et al, 2013 study findings.



### Future Research

The quality of scientific data regarding the management of femur fractures in children is clearly lacking. Controversy exists regarding the optimal management of pediatric femur fractures. A multitude of treatment options exist including Pavlik harness, spica casting, traction, external fixation, flexible intramedullary nailing, rigid intramedullary nailing, and bridge plating. Properly designed randomized clinical trials comparing treatment options are necessary to determine optimal treatment. These trials would benefit from being multicenter trials in terms of accrual of patients and external validity.

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