



FEMUR FRACTURE

Description

A femur fracture is a complete or incomplete break in the thigh bone (femur), the large bone extending from the hip to the knee. This is a serious injury but uncommon in sports. Usually the ankle, lower leg, or knee gives way before the shaft of the femur does.

Common Signs and Symptoms

- Severe pain in the thigh at the time of injury
- Tenderness and swelling in the thigh
- Bleeding and bruising in the thigh
- Inability to bear weight on the injured extremity
- Visible deformity if the fracture is complete and the bone fragments separate enough to distort normal leg contours
- Numbness and coldness in the leg and foot beyond the fracture site if the blood supply is impaired

Causes

- Injury causing a force greater than the bone can withstand, usually due to a direct blow
- Indirect stress caused by twisting or violent muscle contraction

Risk Increases With

- Contact sports (football, soccer, hockey), motor sports, and track and field events
- Bony abnormalities (osteoporosis), tumors of bone
- Metabolic disorders, hormone problems, and nutritional deficiencies and disorders (anorexia, bulimia)
- Poor physical conditioning (strength and flexibility)

Preventive Measures

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
 - Strength, flexibility, and endurance
 - Cardiovascular fitness
- Wear proper protective equipment, such as thigh pads for football or hockey.

Expected Outcome

This condition is usually curable with appropriate treatment, although the fracture may take 6 to 8 weeks to heal.

Possible Complications

- Shock due to blood loss within the thigh
- Failure to heal (nonunion)
- Healing in a poor position (malunion)
- Compartment syndrome due to excessive pressure within the leg causing injury to the blood supply to the leg and foot and injuring the nerves and muscles to the leg and foot (uncommon)

- Shortening of the injured bones
- Arrest of normal bone growth in children
- Risks of surgery, including infection, bleeding, injury to nerves (numbness, weakness, paralysis), need for further surgery
- Infection in open fractures (skin broken over fracture site)
- Myositis ossificans (bone forming within the muscle)
- Prolonged healing time if activity is resumed too quickly
- Proneness to repeated leg injury
- Stiff hip or knee

General Treatment Considerations

Initial treatment consists of medications and ice to relieve pain and reduce swelling. Treatment often requires surgery to hold the fracture in place. This usually requires placing a rod down the center of the bone, although, alternatively, placing a plate or screws to fix the fracture may be recommended. Casting is usually not recommended because the cast would need to involve the abdomen, lower back, and pelvis and extend to the foot. In addition, traction is not usually recommended in adults due to the prolonged constant bed rest and traction

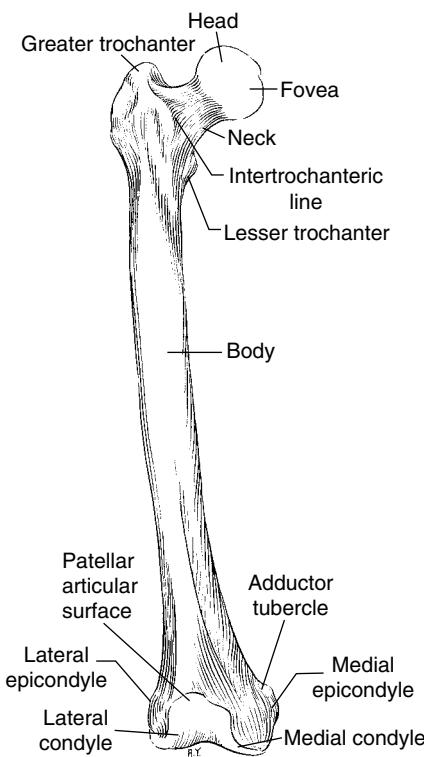


Figure 1

From Jenkins DB: Hollinshead's Functional Anatomy of the Limbs and Back, 6th ed. Philadelphia, WB Saunders, 1991, p. 228.

required (6 to 8 weeks). Uncommonly, bone stimulators, which provide electrical currents to the bone, may be attempted. After the bone heals (with or without surgery), stretching and strengthening of the injured and weakened joint and surrounding muscles (due to the injury and the immobilization) is necessary. This may be done with or without the assistance of a physical therapist or athletic trainer. The rod, plate, or screws do not need to be removed. Rarely, an external fixator (screws in the bone with a connecting frame outside the skin) is used to hold the fracture.

■ ■ ■ Medication

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), are used to reduce inflammation. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic

reaction occur. Other minor pain relievers, such as acetaminophen, may also be used.

- Narcotic pain relievers may be prescribed by your physician for severe pain. Use only as directed.

■ ■ ■ Notify Our Office If

- Symptoms get worse or do not improve in 2 weeks despite treatment
- The following occur after immobilization or surgery (report any of these signs immediately):
 - Swelling above or below the fracture site
 - Severe, persistent pain
 - Blue or gray skin below the fracture site, especially under the nails, or numbness or loss of feeling below the fracture site
 - New, unexplained symptoms develop (drugs used in treatment may produce side effects)

Notes:

(Up to 4400 characters only)

Notes and suggestions