

Bone Fractures

A bone fracture is a break in a bone. The soft tissue surrounding the break may also be injured. Most bone fractures are the result of injuries from falls or vehicle crashes, but fractures can also be caused by certain diseases. The May 5, 2004, issue of JAMA includes an article about **external fixation** (see below) to treat bone fractures.

CAUSES OF BONE FRACTURES

- Injuries from falls, sports, or vehicle crashes
- Osteoporosis—weakening of the bones associated with aging
- Tumors that grow on or near bones
- Prolonged walking or running—sometimes called stress fractures

DESCRIPTIONS OF BONE FRACTURES

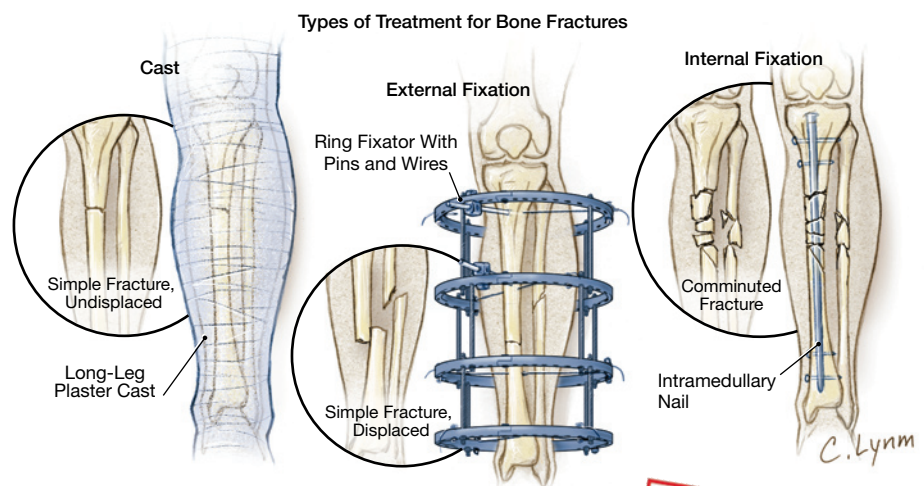
- Simple—the bone is broken in one place.
- Comminuted—the bone is broken in several places with at least 3 bone fragments.
- Open—the skin is injured exposing the broken bone (also called “compound”).
- Closed—the skin is intact over the broken bone.
- Undisplaced—the broken bone pieces are aligned.
- Displaced—the broken bone pieces are not aligned.

TREATING BONE FRACTURES

- If you think you have broken a bone, seek emergency medical care immediately.
- A medical examination and x-rays can help determine if and where a bone is broken.
- The broken pieces may need to be put back in place and then immobilized until the bones can heal as new bone forms around the break.
- The type of treatment will depend on the kind of fracture and the specific bones involved.
- Fractured bones usually need at least 4 weeks to heal although casts may be removed before that to prevent stiffness (particularly for fractures involving the elbow or hand).
- Physical therapy may be required after the bone has healed.

TYPES OF TREATMENT

- Casting—After the broken bones have been manipulated back into their proper positions, a plaster or fiberglass cast is applied to keep the bones from moving while they heal.
- External fixation—Pins or wires are set into the bone through the skin above and below the fracture. These are connected to a ring or a bar outside the skin that holds the pins in place. After the bones have healed, the pins are removed.
- Internal fixation—In a surgical procedure, metal rods, wires, or screws are inserted in the bone fragments to keep them together.



FOR MORE INFORMATION

- American Academy of Orthopaedic Surgeons
800/346-AAOS (2267)
www.orthoinfo.aaos.org
- National Institutes of Health Osteoporosis and Related Bone Diseases National Resource Center
800/624-BONE (2663)
www.osteoo.org

INFORM YOURSELF

To find this and other JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at www.jama.com. A Patient Page on hip fractures was published in the June 6, 2001, issue; and one on preventing hip fractures was published in the October 13, 1999, issue.

Sources: National Institutes of Health Osteoporosis and Related Bone Diseases National Resource Center, American Academy of Orthopaedic Surgeons, American Association of Orthopaedic Medicine

Sharon Parmet, MS, Writer

Cassio Lynn, MA, Illustrator

Richard M. Glass, MD, Editor

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