

Paul D Maitino DO FAOAO Hip Knee Shoulder & sports medicine Oklahoma City OK

Paul D Maitino DO FAOAO Hip Knee Shoulder & sports medicine Oklahoma City OK

Fracture Care

The word “Fracture” implies to broken bone. A bone may get fractured completely or partially and it is caused commonly from trauma due to fall, motor vehicle accident or sports. Thinning of the bone due to osteoporosis in the elderly can cause the bone to break easily. Overuse injuries are common cause of stress fractures in athletes.

Fracture Healing

Our body reacts to a fracture by protecting the injured area with a blood clot and callus or fibrous tissue. Bone cells begin forming on the either side of the fracture line. These cells grow towards each other and thus close the fracture.

Medical Therapy

The objective of early fracture management is to control bleeding, prevent ischemic injury (bone death) and to remove sources of infection such as foreign bodies and dead tissues. The next step in fracture management is the reduction of the fracture and its maintenance. It is important to ensure that the involved part of the body returns to its function after fracture heals. To achieve this, maintenance of fracture reduction with immobilization technique is done by either non-operative or surgical method.

Non-operative (closed) therapy comprises of casting and traction (skin and skeletal traction).

- Casting
 - Closed reduction is done for any fracture that is displaced, shortened, or angulated. Splints and casts made up of fiberglass or plaster of Paris material are used to immobilize the limb.
- Traction
 - Traction method is used for the management of fractures and dislocations that cannot be treated by casting. There are two methods of traction namely, skin traction and skeletal traction. Skin traction involves attachment of traction tapes to the skin of the limb segment below the fracture. In skeletal traction, a pin is inserted through the bone distal to the fracture. Weights will be applied to this pin, and the patient is placed in an apparatus

that facilitates traction. This method is most commonly used for fractures of the thighbone.

Surgical Therapy

- Open Reduction and Internal Fixation (ORIF)
 - This is a surgical procedure in which the fracture site is adequately exposed and reduction of fracture is done. Internal fixation is done with devices such as Kirschner wires, plates and screws, and intramedullary nails.
- External fixation
 - External fixation is a procedure in which the fracture stabilization is done at a distance from the site of fracture. It helps to maintain bone length and alignment without casting.

External fixation is performed in the following conditions:

- Open fractures with soft-tissue involvement
- Burns and soft tissue injuries
- Pelvic fractures
- Comminuted and unstable fractures
- Fractures having bony deficits
- Limb-lengthening procedures
- Fractures with infection or nonunion

Rehabilitation

Fractures may take several weeks to months to heal completely. You should limit your activities even after the removal of cast or brace so that the bone become solid enough to bear the stress. Rehabilitation program involves exercises and gradual increase in activity levels until the process of healing is complete.