

FRACTURES

DESCRIPTION

Complete or incomplete break in a bone, often caused by a fall or contact. Following are the different types of fractures:

- **COMPLETE FRACTURE** - the broken bone is completely separated. This fracture type may be displaced (the bones are not completely touching, if at all, and/or are angulated) or not displaced (the ends are in proper alignment and touching fully).
- **INCOMPLETE FRACTURE (GREENSTICK)** - the broken bone is not completely separated (this type of fracture may or may not be angulated). There is some bone in continuity.
- **OPEN FRACTURE (COMPOUND)** - at least one part of the bone of the fracture has broken through the skin. This fracture has an increased risk of developing an infection.
- **CLOSED FRACTURE** - the fracture has not broken through the skin.
- **COMMINUTED FRACTURE** - The bone is broken into 3 or more segments.
- **COMPRESSION FRACTURE** - The break occurs from extreme pressure on the bone (includes crushing injury).
- **IMPACTED FRACTURE** - The broken ends have been driven into each other
- **AVULSION FRACTURE** - A small piece of bone is pulled off the main bony segment by tendon or ligament due to a strong force
- **PATHOLOGIC FRACTURE** - A break that occurs from a minor injury in bone weakened or destroyed by disease (including osteoporosis and tumors)
- **STRESS FRACTURE** - A complete or incomplete hairline fracture or crack in a bone caused by intense exercise or repetitive and prolonged pressure on the bone.

FREQUENT SIGNS AND SYMPTOMS

- Pain, tenderness, bleeding, bruising and swelling at the fracture site
- Weakness and inability to bear weight on the injured extremity
- Paleness and deformity (sometimes)
- Loss of pulse, numbness, tingling, and/or paralysis below the fracture site (usually an extremity) -
These are Emergencies

CAUSES

Injury causing a force greater than the bone can resist.

EXPECTED OUTCOME

Usually curable with skillful first aid and after care. Healing time varies.

POSSIBLE COMPLICATIONS

- Failure to heal (non-union).
- Healing in poor position (mal-union).
- Shock from blood loss.
- Fat embolus (clump of fat cells traveling through the blood) from the injury site to the lungs or brain (more common with femur / thigh fractures).
- Obstruction of nearby arteries

GENERAL TREATMENT CONSIDERATIONS

Initial treatment for fractures is to reduce the fracture (reposition the bones), performed by trained personnel, usually with or without surgery. Realignment is much more difficult after several days. After this is done, treatment consists of the use of medications and ice to relieve pain and immobilization with a splint, cast and/or brace to allow the bones to heal without moving. Surgery is occasionally necessary to reposition the bones and hold the position with rods, pins, plates and/or screws.

Immobility of a bone for a long period can cause loss of muscle bulk, stiffness in nearby joints, and edema (accumulation of fluid in tissues). Physical therapy may be necessary to regain motion of nearby after immobilization or surgery and to regain strength of the muscles around the joint. Recovery is complete when there is no bone motion at the fracture site, and radiographs show complete healing.

MEDICATION

- General anesthesia, sedation or muscle relaxants may be necessary to make bone manipulation and repositioning possible (when displaced). After this, medications, such as acetaminophen, may also be used to relieve mild to moderate pain.
- Narcotic pain relievers may be prescribed by your physician for severe pain. Use only as directed and only as much as you need.

NOTIFY OUR OFFICE IF:

- The following occur after immobilization or surgery:
 - 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.
- Report any of the above signs immediately.