Fractures

Fracture of even a small bone can be a serious injury. In children, fractures involving the "growth plate" at the end of a bone are a special problem. This is the place where new bone grows, and treatment of these fractures is needed to avoid complications.

What are fractures?

A fracture is a break in a bone. Commonly fractured bones in children include the arm, wrist, and finger bones; the collar bone; and the bones of the leg, ankle, and toes.

Because of differences in the developing skeleton, fractures in children are different from those in adults. Young children with fractures can develop certain complications that don't occur in older children and adults. Fractures also heal more quickly in children than in adults.

What do they look like?

The symptoms of fractures depend on how and where the injury occurred. Common symptoms include:

- Pain—sometimes severe, but not always.
- Bruising.
- Swelling and tenderness.
- Your child may be unable or refuse to use the limb that is injured.

Even for doctors, it can be difficult to tell the difference between a bone fracture, a muscle strain or sprain, or a bruise. X-rays may be needed to tell when a fracture is present.

What causes fractures?

The accident or injury causing the fracture is usually obvious, but not always. Arm and wrist fractures often result from falling onto the outstretched hand. Finger or toe fractures usually result from a direct blow.

Of course, fractures can also result from car crashes and other major accidents. They may also result from child abuse.

What are some possible complications of fractures?

- *Growth plate fractures.* When children get fractures, it is important to find out whether the fracture includes the growing end of the bone, or "growth plate." If so, the growth plate must be in the proper position as the fracture heals. Otherwise, complications related to abnormal bone growth may occur. For example, the limb with the fracture may end up being shorter than the opposite limb.
  - For some fractures, surgery may be needed to make sure the growth plate is in the proper position.
  - Growth plate injuries are not a risk for teenagers after they have stopped growing: around 14 to 16 years for girls, 16 to 18 years for boys.
- *Open fractures.* These are fractures in which the bone is showing. Infection is possible.
- *Nonunion.* The fracture may not heal properly, and the two ends of the broken bone are not united.
- *Malunion.* After healing, the ends of the broken bone may not be properly lined up, resulting in abnormal appearance or function.
- *Compartment syndrome.* Excessive swelling or pressure related to a fracture can interfere with the blood supply to a part of the body.
- Seek medical attention immediately if your child develops any change in color, numbness or tingling, coldness, or extreme pain or swelling of the toes or fingers.

What increases your child's risk of fractures?

- Anything that reduces the amount of bone mass can increase the risk of fractures: for example, radiation treatments for cancer.
- More severe fractures have a higher risk of complications related to abnormal bone healing.

How are fractures treated?

Because their bones are still growing, children's fractures usually heal rapidly. Treatment depends on:

- Which bone is fractured.
- How severe the fracture is.
- Whether the fracture involves a joint.
- Whether the fracture involves a growth plate.

The main goals are to have the bone heal properly and to restore normal function of the injured limb. The broken piece or pieces of bone must be lined up properly for normal healing to occur.

- *Broken finger or toe bones* may be treated in the doctor's office. For finger fractures, a splint may be applied. Broken toes may be "buddy-taped" to the neighboring toe. Your child should reduce his or her activity level for 4 to 6 weeks while the fracture heals.

- For other types of fractures, your child may be sent to see a bone and joint specialist (an orthopedic surgeon).
- *Reduction*. Bones with fractures in which the broken bone is not lined up properly need to be straightened. This is called reduction. A *closed reduction* means the doctor puts pressure on the bones to move them into the proper position without any surgery. Some fractures are so bad that surgery is needed to straighten the bone. This is called an *open reduction*.
- *Casting.* A cast is placed on the fractured area to keep the fragments in place while the bone is healing. X-rays can "see" through the cast, so these may be used to monitor your child's fracture as it heals.
  - The cast will need to be in place for several weeks for complete healing to occur.
  - Keep an eye on the fingers and toes beyond the point of the fracture. Excessive swelling or pressure underneath the cast can cause problems.
  - Be careful not to let your child's cast get wet. Seal the cast in a plastic bag for bathing.
  - Itching under a cast can be a problem. Make sure your child doesn't stick anything under the cast to scratch.
- *Pain.* All fractures are painful. Medications such as acetaminophen, ibuprofen, or narcotics, if necessary, can help to control your child's pain during the initial healing process.

When should I call your office?

Call your orthopedic surgeon's office or our office if:

- Your child has continued pain after a fracture that does not respond to medications.
- Your child's cast or splint falls off or becomes damaged.
- Get medical attention immediately if your child develops any change in color, numbness or tingling, coldness, or extreme pain or swelling of the toes or fingers.

Please type your custom instructions and/or office contact information here.