Olecranon Fracture

When you bend your elbow, you can easily feel its "tip," a bony prominence that extends from one of the lower arm bones (the ulna). That tip is called the olecranon (oh-lek'-rah-nun). It is positioned directly under the skin of the elbow, without much protection from muscles or other soft tissues. So it can easily break if you experience a direct blow to the elbow or fall on a bent elbow.

Signs and symptoms

- Sudden, intense pain.
- Bruising around the elbow.
- Rupture or abrasion of the overlying skin.
- Possible deformity, if there is also a dislocation of the bone.
- Tenderness and swelling over the bone site.
- Numbness in one or more fingers.
- Pain with movement of the joint.

Evaluation and classification

It is important to see a physician and verify that there is no associated damage to nerves or blood vessels. Your physician will use X-rays to confirm the diagnosis and classify the type of fracture. Fractures are generally divided into three types, depending on the stability of the joint and the amount of separation among the broken pieces of bone. (Note: Some fractures can have characteristics of more than one category.)

- Type I fractures are generally stable with little displacement. These fractures can generally be treated nonsurgically.
- Type II fractures are the most common. They are relatively stable, although there is displacement of the bone pieces.
- Type III fractures are displaced and involve more than 50 percent of the joint surface, resulting in joint instability.
Treatment

Treatment depends on the type of fracture.

- A type I fracture can usually be treated with a splint or sling to hold the elbow at a 90 degree angle. The physician will request a second set of X-rays after 10 days to make sure that the broken pieces have not become displaced. Gentle motion is permitted, and hand and wrist exercises should be done daily.
- A type II fracture is best treated surgically. The Orthopedic surgeon will use a plate or a combination of wires and pins or screws to hold the bones in place. Physical therapy to maintain range of motion will start a day or two after the operation, and continue for at least six weeks.
- Type III fractures are also treated surgically, usually with a plate that fits under the ulna and around the tip of the elbow. Screws hold the plate in place. You will have to wear a splint for a couple of days, then physical therapy to maintain range of motion will begin.

Fractures of the tip of the olecranon that do not involve the joint are may be treated by removing the small fragment and repairing the tendon that has pulled off. Elderly people who experience a type II or type III fracture may be treated with a sling and early range of motion instead of surgery. Athletes who have stress fractures of the olecranon are treated with activity restriction, stretching and range of motion exercises, and substitution activities for 8 to 12 weeks, although complete recovery may take three to six months.