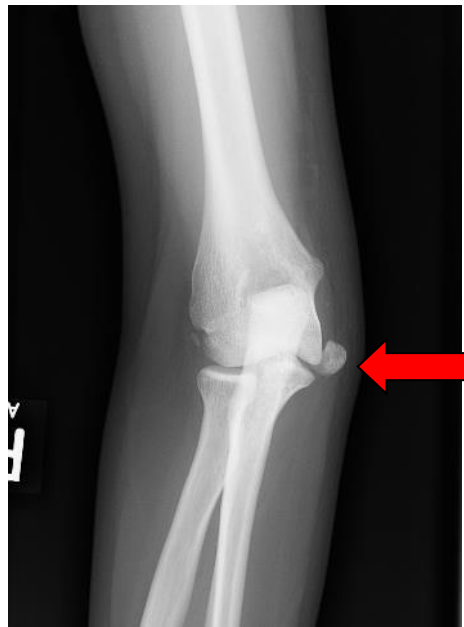


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Epicondyle Fracture of the Elbow

An epicondylar elbow fracture is a broken bone (fracture) in the elbow involving the attachment of the forearm muscles and elbow ligaments to the humerus (arm bone). This usually occurs in children. These fractures often result from a separation at the growth plate, the weakest point in the growing skeleton, and the break may be complete or incomplete. The inner (medial) epicondyle is the attachment of the muscles that flex (bend down) the wrist and the medial ulnar collateral ligament, whereas the outer (lateral) epicondyle is the attachment of the muscles that extend (bend up) the wrist and the lateral ulnar collateral ligament.



Medial epicondylar fracture

Frequent Signs and Symptoms

- Severe elbow pain at the time of injury
- Tenderness, swelling, and later bruising of the elbow
- Visible deformity if the fracture is complete and bone fragments separate (are displaced) enough to distort normal body contours
- Numbness, coldness, or paralysis in the elbow, forearm, or hand from pressure on the blood vessels or nerves (uncommon)



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Etiology (Causes)

- Direct blow or force to the elbow
- Twisting injury to the elbow
- Indirect stress due to falling on an outstretched hand
- Violent muscle contraction
- Associated elbow dislocation

Risk Factors

- Contact sports, such as football, hockey, and rugby
- Sports in which falling is likely (basketball, skating)
- Children under 14 years of age
- History of bone or joint disease
- Poor physical conditioning (strength and flexibility)

Prevention

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
 - Cardiovascular fitness
 - Elbow strength and flexibility
 - Endurance
- Wear protective equipment, such as elbow pads for football.

Outcomes

With appropriate treatment and good alignment of the epicondylar fracture fragments, healing can be expected. Surgery may be necessary to realign epicondylar fractures that are displaced. Average healing time is 4 to 6 weeks in children and recovery can take 3 to 4 months.



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Potential Complications

- Nonunion (fracture does not heal) or malunion (fracture heals in a bad position)
- Chronic pain, stiffness, loss of motion, or swelling of the elbow
- Excessive bleeding in the elbow or at the fracture site, causing pressure and injury to nerves and blood vessels (uncommon)
- Heterotopic ossification (calcification of the soft tissues about the elbow)
- Weakness of the wrist muscles
- Unstable joint following repeated injury or malunion of the bony attachment of muscle or delayed treatment
- Arrest of normal bone growth
- Abnormal angulation of the elbow

Treatment Considerations

If the epicondylar bone fragments are in appropriate alignment (position), the initial treatment consists of ice and elevation of the injured elbow at or above heart level to reduce swelling. Medications are prescribed to help relieve pain. Immobilization by splinting, casting, or bracing for 4 or more weeks is recommended to protect the bones while they heal. A sling may afford comfort while in the cast or splint. Fractures that are displaced (not in appropriate alignment) may require surgery to restore and maintain the muscular and ligament attachments to its normal position. Surgery usually includes repositioning the bones and holding the position with screws or pins. After immobilization (with or without surgery), stretching and strengthening of the injured and weakened joint and surrounding muscles (due to the injury and the immobilization) are necessary. These may be performed with the assistance of a physical therapist or athletic trainer.

Possible Medications

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Strong pain relievers may be prescribed as necessary. Use only as directed and only as much as you need.



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Modalities (Cold Therapy)

Cold is used to relieve pain and reduce inflammation. Cold should be applied for 15 to 20 minutes every 2 to 3 hours for inflammation and pain. Use ice packs or an ice massage.

Notify My Office If Symptoms Worsen



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