



Vasu Pai MS, MCh, FRACS

Elbow fracture [Supracondylar fracture]

Is the commonest fracture around the elbow

These fractures account for about 10 percent of all fractures in children.

Minimally displaced fractures can be treated in a cast.

Displaced fracture requires internal fixation

What causes an elbow fracture in children?

Many activities can cause elbow fractures in children, but jungle gyms are far and away the primary culprit! Kids falling from jungle gyms can injure their elbows as they fall to the ground. Other common activities that cause elbow injuries include gymnastics, football, jumping on beds, and rough play.

How to know about your injury?

History of fall

Child complains of elbow pain after a fall

Refuses to straighten his or her arm, see a doctor immediately.

The doctor will first check to see whether there is any damage to the nerves or blood vessels.



This child has a severe right supracondylar humerus fracture with complete displacement of the fracture fragments.

Your doctor may request an x-ray of the opposite elbow (your child's uninjured side) to compare the two for differences. Often the only sign of a broken elbow in a child is swelling seen on x-ray. In this case, the elbow should be treated as having a break. Because a child's bones are still forming, the doctor may request X-rays of both arms for comparison.

Supracondylar fracture:

Commonest fracture around elbow in children

Usually occur in children younger than 8 years of age.

One of the more serious because it can result in nerve damage and impaired circulation.



Lateral and medial condylar: [the elbow knobs]:

Most occur through the outer (lateral) knob.

Requires careful treatment: can disrupt the growth plate



Lateral condyle #



Medial epicondyle #

Radial Neck Fractures

Radial neck fractures are uncommon in adults but often occur in children. The treatment of a radial neck fracture depends on the angulation of the fracture. Treatment may consist of casting, manipulation, or possibly placing pins across the fracture.



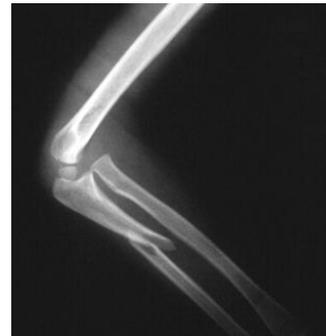
Radial head subluxation [Pulled elbow]

While not a broken bone, a radial head subluxation is a common injury in a young child's elbow. These injuries are usually placed back into position quite easily.

Fracture dislocation elbow:[Monteggia fracture]

A fracture of the inside bone (ulna) can be combined with the top of the thumb-side bone (radius) coming out of the socket at the elbow.

If the dislocation is not seen, and only the fracture is treated, this can lead to permanent impairment of elbow joint function.



Broken Elbow Treatment

Splints

Splinting is the treatment for many elbow fractures, especially those that are not out of place. A splint is also commonly used when there is suspicion of an elbow fracture but with normal x-rays.

In the case of normal x-rays, a splint will be placed and your child will have new x-rays about a week after injury. The repeat x-rays often show signs of healing of the fracture.

Casts

Casts are often used to treat elbow fractures, but not after the initial injury. More commonly the elbow will be splinted for a week, and a cast may be placed after the swelling has had time to subside. Most fractures heal by 3-4 weeks.

Surgery

Pins

The pins are placed by an orthopaedic surgery with your child under general anaesthesia.

The pins hold the fracture in proper position until sufficient healing has taken place, usually about 3 to 6 weeks.

A small incision may be necessary to reposition the fracture and to protect the nerves around the elbow joint.

Pins will be removed at 3-4 wks. There is a small risk of pin track infection, usually settles with antibiotics and removal of pin.



Screws

In older children, sometimes a screw is used to hold the fracture in proper position. Pins are usually used in younger children, but in children who are approaching skeletal maturity a screw may be used instead.



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What are the long term complications of elbow fractures in children?

1. Because the fractures are often around the growth plate, there is always a chance of injury to the growth plate. This is uncommon, and the only way to tell if the growth plate is permanently injured is to watch the child over time and look out for any deformity.
2. Other potential complications include restriction of motion of the elbow joint
3. Damage to nerves and blood vessels around the elbow
4. Infection of the pins that are placed into the elbow
5. Sometimes nerves can be damaged and very often they recover on observation
6. 1% Circulation damage: needing repair by vascular surgeon
7. Extra bone formation causing stiffness