

Radial Head

What is a Radial Head fracture?

A radial head fracture is a break in the portion of the radius that forms part of the elbow joint. The radial head meets the lateral end of the humerus, called the capitellum. Rotation of the forearm occurs mainly at the radiocapitellar joint.

What causes a Radial Head Fracture?

A fall onto an outstretched hand is the most common cause. Force is transmitted from the ground, through the wrist and forearm and the radial head is impacted on the capitellum causing the fracture. Dislocations or direct blows to the outside of the elbow may also cause fractures of the radial head.

What are the symptoms?

Patients will complain of pain and swelling in the elbow. They will be unable to straighten or fully flex the elbow. Rotation of the forearm will cause substantial pain. A click may be felt with rotation.

How is a Radial Head Fracture diagnosed?

The surgeon will perform a physical exam of the elbow. Swelling inside the elbow joint, combined with a history of trauma, is highly suspicious for a fracture. A palpable click, or pain with palpation of the radial head is another indication of fracture. X-rays will confirm the diagnosis. A CT scan might be obtained to evaluate displacement of the fracture, or for pre-operative planning.

How is it treated?

Non-operative

Non-displaced fractures of the radial head can be treated non-operatively. The patient is immobilized in a sling or splint for approximately ten days. The splint is discontinued and physical therapy is begun. Periodic x-rays are obtained to evaluate displacement of the fracture. Because the adult elbow quickly becomes stiff as a result of inflammation, early physical therapy for range of motion is the key to preventing permanent motion loss.

Operative

Fractures of the radial head, which are displaced more than two millimeters, require operative stabilization. This is performed through an open incision. Screws are placed across the fracture sight, and early therapy is prescribed to prevent motion loss. In cases where the radial head fracture cannot be repaired, it is removed. A radial head replacement may be required if there is a ligamentous injury to the medial elbow or wrist, or if the patient cannot tolerate loss of the radial head fragment.