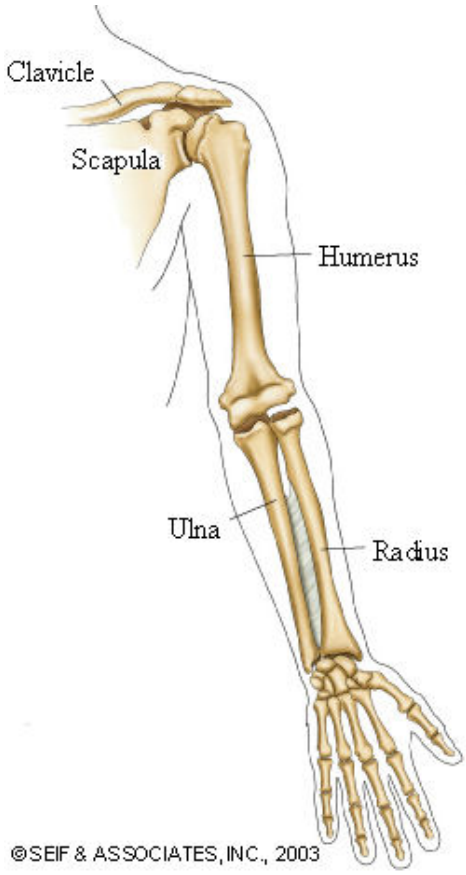
Radial Head Fractures

A radial head fracture is a break of the smaller bone (*radius*) in the forearm. The head of this bone is the part near the elbow. These fractures commonly happen during a fall when you land on the outstretched arm. These fractures are more common in middle aged adults and are common with a dislocation of the elbow.



SYMPTOMS

- Swelling of the elbow joint and pain on the outside of the elbow.
- Pain and difficulty in bending or straightening the elbow.
- Pain and difficulty in turning the palm of the hand up or down with the elbow bent.

DIAGNOSIS

Your caregiver may make this diagnosis by a physical exam. X-rays can confirm the type and amount of break. Sometimes a break which is not displaced cannot be seen on the original x-ray.

TREATMENT

Radial head fractures are classified according to the amount of movement (*displacement*) of parts from the normal position.

Type 1 Fractures

- Type 1 fractures are generally small fractures in which bone pieces remain together (non-displaced fracture).
- The fracture may not be seen on initial X-rays. Usually if x-rays are repeated two to three weeks later, the fracture will show up. A splint or sling is used for a few days. Gentle early motion is used to prevent the elbow from becoming stiff. It should not be done vigorously or forced as this could displace the bone pieces.

Type 2 Fractures

- With type 2 fractures, bone pieces are slightly displaced and larger pieces of bone are broken off.
- If only a little displacement of the bone piece is present, splinting for 4 to 5 days usually works well. This is again followed with gentle active range of motion. Small fragments may be surgically removed.
- Large pieces of bone that can be put back into place will sometimes be fixed with pins or screws to hold them until the bone is healed. If this cannot be done, the fragments are removed. For older, less active people, sometimes the entire radial head is removed if the wrist is not injured. The elbow and arm will still work fine. Soft tissue, tendon, and ligament injuries are corrected at the same time.

Type 3 Fractures

- Type 3 fractures have multiple broken pieces of bone which cannot be fixed. Surgery is usually needed to remove the broken bits of bone and what is left of the radial head. Soft-tissue damage is repaired. Gentle early motion is used to prevent the elbow from becoming stiff. Sometimes an artificial radial head can be used to prevent deformity if elbow is instable.

Rest, ice, elevation, immobilization, medications, and pain control are used in the early care.

HOME CARE INSTRUCTIONS

- Keep the injured part elevated while sitting or lying down. Keep the injury above the level of your heart (the center of the chest). This will decrease swelling and pain.
- Apply ice to the injury for 15 to 20 minutes, four times per day while awake, for 2 days. Put the ice in a plastic bag and place a towel between the bag of ice and your cast or splint.
- Move your fingers to avoid stiffness and minimize swelling.

- If you have a plaster or fiberglass cast:
  - Do not try to scratch the skin under the cast using sharp or pointed objects.
  - Check the skin around the cast every day. You may put lotion on any red or sore areas.
  - Keep your cast dry and clean.
- If you have a plaster splint:
  - Wear the splint as directed.
  - You may loosen the elastic around the splint if your fingers become numb, tingle, or turn cold or blue.
- Do not put pressure on any part of your cast or splint. It may break. Rest your cast only on a pillow for the first 24 hours until it is fully hardened.
- Your cast or splint can be protected during bathing with a plastic bag. Do not lower the cast or splint into water.
- Only take over-the-counter or prescription medicines for pain, discomfort, or fever as directed by your caregiver.
- Follow all instructions for follow up with your caregiver. This includes any orthopedic referrals, physical therapy and rehabilitation. Any delay in obtaining necessary care could result in a delay or failure of the bones to heal or permanent elbow stiffness.
- Do not over do exercises. This could further damage your injury.

PROGNOSIS

- Even simple fractures with the very best of care can result in some loss of ability to straighten the elbow.
- Physical therapy will help regain the best elbow use to resume activities.
- There is no set healing time.
- Healing is affected by the type of fracture, your age, nutritional status, other illness present, medications, associated elbow injuries and general health.

SEEK IMMEDIATE MEDICAL CARE IF:

- Your cast or splint gets damaged or breaks.
- You have more severe pain or swelling than you did before getting the cast.
- You have severe pain when stretching your fingers.
- There is a bad smell, new stains and/or pus-like (*purulent*) drainage coming from under the cast.
- Your fingers or hand turn pale or blue, become cold, or you lose feeling.

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