

## Wrist Injury Radius (Colles') Fracture

The radius is one of the long bones in the forearm. A Colles' fracture (same as a break) is a particular pattern of fracture where the distal part of the **bone shifts or displaces backwards** and gives the wrist and hand a typical 'dinner fork deformity'.

### Cause:

It is most commonly fractured during a fall on an outstretched hand and is **associated with osteoporosis** in older patients. For this reason, it is good to consider having a **bone mineral density test** with your GP after you have recovered from your distal radius fracture.

### Symptoms:

- Pain
- Deformity
- **Numbness in the fingers makes treatment more urgent** as it means the nerves may be stretched over the deformed bones.

### Diagnosis:

**An x-ray is usually enough for diagnosis.** An undisplaced fracture can be missed on plain x-ray. If I still think a fracture is likely I will treat in a cast for symptom control and to prevent secondary injury. **Occasionally I will get a CT** to confirm a fracture is undisplaced or for surgical planning.

Treatment:

Depends if it is undisplaced or displaced.

Undisplaced or **minimally displaced fractures:**

- **Treated in a cast for 6 weeks.**
- Patients recover well after some early pain and stiffness.
- Some radius deformity is tolerated well. The distal bone and joint surface should tilt forward  $11^\circ$ , but patients usually recover near normal function, even if the bone is tilted backwards  $\leq 10^\circ$ .
- Hand therapy may be required to help get the hand moving in the early stages and the wrist moving once the cast is removed.

**Displaced fractures:**

- **Usually require surgery.**
- Are often unstable, especially in older patients with osteoporotic bone, therefore they are treated with an open reduction and internal fixation using a plate and screws.
- **Outcome** is usually good, but is **influenced by the pattern and severity of the fracture.**
- Depending on the fracture pattern and the type of plate used your plate may need to be removed in a 2<sup>nd</sup> operation 6-12 months later.

