Sussex Hand Surgery

CONDITION
Distal Radius Fractures

CONDITION

What is a Distal Radius fracture?

The radius bone is one of the two bones in the forearm, the other being the ulna. The distal part of the radius is the end nearest your wrist joint. This part of the radius is very commonly broken. Often there is also a break of the end of the ulna with these injuries.

Normal Wrist Xray

A fracture of the distal radius

How do distal radius fractures occur?

The commonest way to break this bone is simply to trip and fall landing heavily on the palm of your hand. This fracture is more common in older women and might indicate that the bones are becoming weaker (see page on Osteoporosis).

Fractures in this area also occur in younger people and this may involve more force, such as a fall from a height or a road traffic accident.

How is the diagnosis made?

The diagnosis is usually fairly obvious from the story and an examination. Xrays usually confirm the diagnosis although the fracture can be difficult to see in some cases. Very occasionally a computerised tomography (CT) or magnetic resonance imaging (MRI) scan are ordered to obtain more detail about the fracture or possible associated soft tissue injuries inside the wrist.

What treatment is need for distal radius fractures?

All patients with a distal radius fracture should consider taking 500mg of Vitamin C a day whilst the fracture heals as there is some evidence that this reduces the incidence of Complex Regional Pain Syndrome after this injury (see page on this condition).

If you are concerned you may have Osteoporosis you should discuss this with your doctor in clinic or your GP (see page on this condition).

You should keep the injured arm elevated at all times to reduce the swelling.

You should also and keep the fingers, thumb, elbow, shoulder and neck all moving to reduce stiffness.

Fortunately the majority of these fractures can be treated with a simple plaster cast and some exercises afterwards to work on getting the wrist mobile again. At the moment we treat about three quarters of our patients with this sort of fracture this way. Your plaster should:

- Be comfortable, but supportive, not tight and painful.
- Be kept dry.
- Not applied to force your wrist into a flexed (bent towards the palm) position
- Not applied to restrict movement of your thumb or fingers
- Not make your fingers feel tingly or numb

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You should return to the Accident and Emergency Department or the Plaster room of the Fracture clinic immediately if you are at all concerned regarding any of these points.

A bandage with some plaster incorporated (backslab) is usually applied first in the Accident and Emergency Department and this is replaced a few days later in the Orthopaedic Fracture clinic when the swelling has come down a little. The plaster can often be replaced by a removable splint 4 weeks after the injury to allow gentle exercises of the wrist to start. You should not lift anything heavier than a cup of tea with the injured hand until 6 weeks after the accident.

If the pieces of broken bone have moved out of position they will heal up in that position, not normally lined up. We know that the long term function of the wrist may not be as good as before if the parts are very badly lined up when they heal – this is called a mal-union.

If the bony pieces are not well lined up your doctor may suggest trying to improve the position whilst the bones heal up.

When you are first seen in the Accident and Emergency Department a MUA (manipulation under anaesthetic) may be attempted. Here the arm or fracture is made numb with local anaesthetic and then the bone fragments are pulled and pushed back into a better position by hand as the backslab is applied.

If the position of the broken bone fragments still looks poor an operation in theatre might be discussed with you. The most common operation these days is called an ORIF which stands for Open Reduction and Internal Fixation. In this operation skin and soft tissues are opened up and held out of the way while the bone fragments are individually put back in the right place. The 'jigsaw' puzzle is then held together with a strong plate and screws (see page about this operation for more details).

The decision whether or not to operate is very individual, depending on your circumstances, other medical problems, and your particular fracture pattern. Your surgeon will discuss your treatment with you.

What is the outcome following a distal radius fracture?

The vast majority of patients recover good function of their wrist after this injury although the final results might not being seen until up to a year after the original injury.

Occasionally patients with a distal radius fracture develop a rupture (tear) in the long tendon that lifts up the tip of the thumb (Extensor Pollicis Longus). This is a nuisance and patients often decide to have a tendon transfer to restore this function (see 'Surgery', 'Hand', 'Tendon Transfer Surgery' information sheet).

Less good results can be seen with:

- Poor bone fragment alignment when the fracture heals
- Stiffness of the soft tissues
- Nerve injuries (numbness or tingling of the fingers)
- Other associated injuries (other fractures or ligament injuries in the ulna or wrist)