

## SCAPHOID FRACTURES

Fractures of the scaphoid bone account for about half of all wrist injuries and typically occur in young men. They usually result from a fall on an outstretched hand. Increasing force produces a spectrum of injuries to ligaments and other bones in the region.

The majority (85-90%) of scaphoid fractures will heal if properly immobilized for a sufficient period. However, a fracture can disturb the blood supply that enters the bone at its far end (distal pole). This can cause death of portions of the bone (osteonecrosis), particularly at its near end (proximal pole) and either the fractures to heal slowly (delayed union) or not at all (non-union).

Scaphoid fractures cause tenderness and pain at the wrist and base of thumb, often aggravated by movement or compression. On examination, a doctor will seek tenderness at the hollow on the side of wrist called the "anatomical snuff-box". If a fracture is suspected, x-rays will be performed. These fractures can be difficult to diagnose and may not be evident initially on x-rays. As a result, a patient is assumed to have fracture of the scaphoid until repeat assessment excludes the diagnosis.

The standard treatment is for the wrist to be placed in a splint and arrangements made for reassessment after two weeks. If there is a strong clinical suspicion of a scaphoid fracture, which cannot be confirmed by conventional x-rays, further scans will be performed. There are two approaches to treatment once a fracture is diagnosed: -

**Splint** The usual management of a fractured scaphoid is a period of immobilisation in a splint or "plaster" for no less than six weeks in the first instance. Arrangements are made for review in clinic and repeat x-rays. If the wrist remains tender, the splint will be reapplied until the local tenderness subsides and/or the x-rays show the fracture to have healed. The wrist is likely to need splinting for anything up to twelve weeks. It can be very difficult to be certain even at this stage if the fracture has united and it is likely that you will be recalled for a later assessment at six months for certainty of healing.

**Surgery** Some fractures are treated by surgical fixation; the indications being that the bone fragments have moved (displaced), particularly if there is an associated ligament injury. This treatment will also be supplemented by splinting although usually for a shorter period unless there are associated injuries.

Once the splint has been removed, you will need to start a programme of exercises to recover movement, initially supervised by physiotherapists. You will step up your activities according to common sense, guided by discomfort over a six month period.

**Non-union** may result from poor blood supply or because of inadequate immobilization. Whilst non-unions may cause no immediate pain, they will cause problems by about five years. Patients with non-unions will often be advised to undergo corrective surgery to reduce the possibility of the development of arthritis (see scaphoid non-union sheet).

**Osteoarthritis** is rare if an undisplaced fracture heals quickly. It is more likely when the fracture was displaced and inevitable if the fracture fails to heal (see wrist arthritis sheet).

