

Wrist Fractures



What is a Wrist Fracture?

A **wrist fracture** is a break in one or more of the bones around the wrist. The most common wrist fracture involves the **distal radius**, the larger of the two forearm bones, but fractures can also occur in the **ulna** or the **carpal bones**.

Wrist fractures are common injuries and often occur following a fall onto an outstretched hand. They can affect people of all ages, from younger individuals involved in sports or high-energy injuries to older adults following lower-energy falls.

Symptoms can range from mild pain and swelling to obvious deformity. Some fractures are stable and can be treated with splinting or casting alone, while others require surgery to restore alignment and allow the wrist to function normally.

Causes and Risk Factors

Wrist fractures are most commonly caused by trauma. Common causes include:

- **Falls**, particularly onto an outstretched hand
- **Sports injuries**, including contact sports
- **Road traffic accidents**
- **Direct blows** to the wrist
- **High-energy injuries**, such as falls from height

Factors that may increase the risk of wrist fractures include:

- **Age:** While wrist fractures can occur at any age, they are more common with increasing age.
 - **Osteoporosis**, which weakens the bones
 - Participation in **sporting activities**
 - **Manual occupations**
 - Previous wrist fractures
 - Reduced balance or increased risk of falling
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Symptoms

The symptoms of a wrist fracture can vary depending on the severity of the injury, but common signs include:

- **Pain** around the wrist, often worse with movement
- **Swelling** around the wrist
- **Bruising** or discoloration
- **Tenderness** when touching the wrist
- **Reduced movement** or difficulty using the hand
- **Deformity**, such as the wrist appearing bent or out of position
- **Weakness** in the hand or wrist
- In some cases, **numbness or tingling**, particularly if nearby nerves are affected

In some fractures, particularly those involving the distal radius, the wrist may develop a characteristic "**dinner fork**" **deformity**, where the wrist appears bent upwards.

Diagnosis & Investigation

Wrist fractures are diagnosed **based on clinical history and physical examination**, supported by imaging.

During your visit:

- The surgeon will ask about **how the injury occurred**, the timing of symptoms, and any previous injuries.
- A **physical examination** will assess swelling, tenderness, deformity, and wrist movement.
- Circulation and nerve function to the hand and fingers will be carefully assessed.

Imaging

- **X-rays** are usually required to confirm the diagnosis and determine the type and severity of the fracture.

- In **rare cases**, additional imaging such as **CT scans** may be required to assess complex fractures or involvement of the joint surface.
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Non-Surgical Treatment

Many wrist fractures can be treated without surgery, particularly if the bones remain well aligned.

Non-surgical treatment options may include:

- **Splinting or casting** to protect the fracture and allow healing
- **Manipulation under anaesthetic (MUA)**, where the bones are repositioned and then immobilised in a cast
- **Activity modification**, avoiding heavy use of the injured wrist
- **Pain relief medication**, such as paracetamol or anti-inflammatory medication
- **Hand therapy**, to help restore movement and strength after immobilisation

Stable fractures often heal successfully with these measures.

Surgical Treatment

Surgery may be recommended if the fracture is **displaced, unstable**, involves the **joint surface**, or cannot be held in a satisfactory position with casting alone.

Common surgical options include:

Manipulation Under Anaesthetic (MUA)

In some cases, the fracture can be **realigned without making an incision**. This is performed under local or general anaesthetic, allowing the surgeon to reposition the bones into the correct alignment before applying a cast.

Fracture Fixation with Pins (K-wires)

Thin metal wires (**Kirschner wires or K-wires**) may be used to hold the bones in the correct position. These are often used following manipulation of the fracture and are usually removed once healing has occurred.

Plate and Screw Fixation

For many distal radius fractures, fixation using a **plate and screws** provides stable alignment of the bone. This technique is commonly used when fractures are unstable or involve the joint surface and may allow earlier movement in some cases.

External Fixation

In certain injuries, particularly **severe fractures**, **open fractures**, or fractures with significant soft tissue injury, an **external fixator** may be used to stabilise the bones while healing occurs.

The choice of treatment depends on the type of fracture, bone quality, age, and functional demands of the patient.

Recovery

Recovery following a wrist fracture depends on the type of fracture and whether surgery is required.

- Most wrist fractures take **6 weeks** to heal sufficiently.
- **Hand therapy** is often recommended to restore wrist movement, strength, and function.
- Stiffness is common following wrist fractures, particularly after immobilisation.

Recovery times vary depending on treatment:

- **Simple fractures treated in a cast** usually require immobilisation for **4–6 weeks**.
 - **Manipulation under anaesthetic** is followed by casting to maintain alignment.
 - **Fractures treated with K-wires** typically require immobilisation followed by rehabilitation.
 - **Plate and screw fixation** may allow earlier movement but still requires structured rehabilitation.
 - Full recovery of strength and function may take **several months**, particularly in more complex fractures.
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Risks

Although treatment of wrist fractures is usually successful, complications can occur, including:

- Infection
- Stiffness or reduced range of motion
- Malunion (healing in an incorrect position)
- Non-union (failure of the fracture to heal)
- Tendon irritation or rupture
- Nerve injury
- Persistent pain or weakness
- Hardware irritation (in surgical cases)

Early treatment and appropriate rehabilitation help reduce the risk of complications.

When to See One of Our Hand Specialists

You should consult a hand specialist if:

- You have sustained an injury to your wrist and have **pain, swelling, or deformity**
- You are unable to move your wrist normally
- Your wrist appears **bent or deformed**
- Symptoms are not improving after initial treatment
- You have ongoing pain or reduced function following a previous wrist injury

If you have an open wound associated with a fracture, a severe injury, or significant deformity, this should be assessed urgently in the Emergency Department (A&E).

Book and Appointment:

