

What is a distal radius fracture?

A distal radius fracture is a break at the lower end of the radius — the larger forearm bone — close to the wrist joint. It accounts for 8–15% of all adult fractures and is one of the most common injuries seen in UK emergency departments.

It is especially common in:

- Younger adults after high-energy trauma (sport, falls from height, road traffic)
- Older adults — particularly women — after a simple fall onto an outstretched hand, often linked to osteoporosis

BOA / BSSH Principle

"The aim of treatment is to optimise functional recovery rather than to achieve specific radiological parameters."
(BOA BOAST: Management of Distal Radial Fractures, 2017)

In the Emergency Department

The team will have:

- Recorded how your injury happened and examined your wrist — checking skin, circulation and sensation
- Taken two X-ray views of your wrist (front-on and side-on)
- If the bone needed straightening, this should be done using a regional nerve block — not just a local injection — performed by a trained practitioner (BOA standard)

You should be seen in fracture clinic within 72 hours of your Emergency Department attendance (BOA BOAST standard).

Your cast or splint

Whether you have a plaster cast or a removable splint, the BOA and BSSH recommend:

- Cast applied with your wrist in a neutral (straight) position — not bent downwards. Three-point moulding supports the fracture. Forced palmar flexion is no longer recommended.

- Stable fractures may be held in a removable splint, allowing earlier gentle movement
- For most non-operative fractures, the cast is removed and mobilisation begins at ~4 weeks

Keep your fingers moving!

While in your cast, bend and straighten all your fingers fully several times every hour. This reduces swelling and prevents stiffness.

Non-operative (conservative) treatment

Many distal radius fractures heal well without surgery. This is recommended for:

- Stable, undisplaced fractures in patients of any age
- Patients aged 65 or over: non-operative treatment is the BOA/BSSH recommended first-line even for dorsally displaced fractures, unless there is significant deformity or nerve compression

This is supported by evidence from NICE NG38 and the BOA/BSSH Blue Book.

Surgical treatment

Surgery may be needed if the fracture cannot be held in an acceptable position, or if you are younger with an unstable pattern. The BOA sets these timing standards:

Fracture type	Surgery within
Intra-articular (joint involved)	72 hours
Extra-articular	7 days
Re-displaced after manipulation	72 hrs of decision

- Types of surgery:
- K-wire fixation — thin wires through the skin to hold bone; removed in clinic at 4–6 weeks. Used when fracture can be reduced by closed manipulation.
 - Volar locking plate (ORIF) — a metal plate fixed to the front of the radius. Used for complex fractures or those that cannot be reduced by closed means.
 - Volar (palm-side) displaced fractures are unstable and should be considered for open reduction and plate fixation as standard (BOA).

Your recovery

Recovery takes several months, though most people regain good function. The BOA states all patients must receive information on expected recovery and rehabilitation.

When	What to expect
Week 1–2	Pain and swelling at worst. Keep hand elevated above heart level.
Week 2–4	Swelling settles. Continue finger exercises throughout.
Week 4–6	Cast usually removed. Wrist movement exercises begin.
Month 2–3	Gradual return of strength and movement with hand therapy.
Month 3–6	Most daily activities restored. Full recovery up to 12 months.

Hand therapy / physiotherapy is an important part of your recovery and is supported by BSSH evidence, particularly after surgery.

Pain and swelling

- Take regular paracetamol; anti-inflammatories (e.g. ibuprofen) if no contraindications
- Keep your hand elevated above heart level for the first few days
- Apply a bag of frozen peas wrapped in cloth for 10–15 min several times daily (never directly on skin)
- Avoid strenuous use until cleared by your team

Returning to activities

The BOA states all patients should receive guidance on returning to work, education and driving.

Activity	Guidance
Driving	Not while in plaster. Resume when emergency stop is safe — usually ~6–8 weeks. Check with your team and insurer.

Desk/light work	Often possible within 2–4 weeks depending on your dominant hand.
Manual work	Usually 8–12+ weeks; longer after surgery.
Sport	Low-impact (walking) can continue. Contact/racquet sport typically 3–6 months.

Bone health & falls prevention

If you are aged **50+ or broke your wrist after a low-energy fall**, this may indicate osteoporosis. The BOA recommends:

- Referral to a **Fracture Liaison Service (FLS)** for bone density assessment and treatment to reduce future fracture risk
- Adequate **calcium and vitamin D**, weight-bearing exercise, stopping smoking
- A **DEXA scan** (bone density) may be arranged by your GP or FLS team

Possible complications

Most fractures heal well. Be aware of:

- **Stiffness** — most common; hand therapy helps significantly
- **Malunion** — bone heals in slightly off position; mild malunion is usually well tolerated in older patients
- **Carpal tunnel syndrome** — tingling/numbness in thumb and first two fingers; usually improves, occasionally needs treatment
- **Tendon problems** — rare; report any new weakness or snapping sensation
- **Complex Regional Pain Syndrome (CRPS)** — persistent burning pain, swelling and skin changes; early therapy and pain management are key
- **Infection** — rare; report increasing redness, warmth or discharge urgently

When to seek urgent help

Contact the fracture service or attend A&E; if you notice:

- Pain not controlled by regular painkillers
- Numbness, tingling or loss of feeling in fingers
- Fingers pale, blue or very cold
- Cast feels very tight or is rubbing badly
- Redness, swelling, warmth or discharge (infection)
- Cast breaks or becomes soft

The BOA states patients should be able to self-refer back to the fracture service if progress is not as expected.

Wrist exercises after cast removal

Only begin these when your clinical team advises. Stop if they cause significant pain.

1. Wrist flexion & extension

Gently bend your wrist up then down. Hold 5 seconds. Repeat 10 times, 3–4× daily.

2. Forearm rotation

Elbow at side, bent 90°. Rotate palm up then down slowly. Repeat 10 times, 3–4× daily.

3. Side-to-side (deviation)

Move wrist side to side — thumb up, then little finger up. Repeat 10 times, 3–4× daily.

4. Grip strengthening

Gently squeeze a soft ball or rolled towel. Progress firmness as strength returns. Begin only when cleared by your therapist.

Your hand therapist will tailor these exercises to your specific needs and progress. Evidence cited by the BSSH supports supervised rehabilitation to optimise outcomes, particularly following surgery.

At your fracture clinic appointment

The specialist team will:

- Review your X-rays and examine your wrist
- Decide whether surgery is recommended or whether non-operative management continues
- Discuss your options and answer your questions
- Arrange **repeat X-rays at 1–2 weeks** if the fracture pattern is thought to be unstable and surgery would be considered if the bone shifts

A routine X-ray at the time of cast removal is **not** required unless there is a clinical reason for concern (BOA BOAST).

Frequently asked questions

Q: Will I need physiotherapy?

Many people benefit from hand therapy after cast removal, particularly after surgery. Your team will refer you if needed.

Q: When can I shower or bathe?

Keep your plaster cast completely dry. Use a waterproof cast cover or a plastic bag secured above the cast. A removable splint can be taken off briefly for washing.

Q: Will my wrist be fully normal again?

Most people regain excellent function. Some stiffness or mild aching with weather changes can persist, particularly in older patients. The BOA emphasises functional recovery as the primary goal.

Q: What if my bone position shifts after I go home?

Contact the fracture clinic. You are entitled to self-refer back if you have concerns — hospitals are required by the BOA to provide this mechanism.

Evidence base

This leaflet is based on:

- **BOA BOAST:** The Management of Distal Radial Fractures. December 2017. www.boa.ac.uk
- **BSSH / BOA Blue Book:** Best Practice for the Management of Distal Radius Fractures. 2018. www.bssh.ac.uk

- **NICE NG38:** Non-complex fractures: assessment and management. 2016.
www.nice.org.uk/guidance/ng38

Your key contacts

Fracture clinic: _____

Hand therapy: _____

Fracture Liaison Service: _____

GP surgery: _____

This leaflet provides general guidance based on national evidence. Your treatment will be individualised to your needs by your clinical team. If you have questions not answered here, please speak to your fracture clinic team, hand therapist or GP.