

Post-operative rehabilitation protocol

Forearm fracture fixation (radius and ulna ORIF)

Plate fixation of one or both forearm bones. For patients, physiotherapists, and GPs.

Prof. Mohamed A. Imam

MD, MSc (Hons), D.SportMed, PhD, FRCS (Tr & Orth)

Consultant Orthopaedic Surgeon: upper limb, sports injuries, and complex trauma

Rowley Bristow Orthopaedic Centre, Ashford and St Peter's Hospitals NHS Foundation Trust

www.TheArmDoc.co.uk

The plan at a glance

The plates hold the bones in line so the forearm can turn. Movement starts early. Forearm bones heal slowly, so heavy loading and contact sport wait for X-ray proof of healing.

	Phase 1 Weeks 0 to 2	Phase 2 Weeks 2 to 6	Phase 3 Weeks 6 to 12	Phase 4 After 12 weeks
Splint	Bulky bandage or backslab. Sling for comfort	Removable splint for comfort only	None	None
Movement	Fingers, elbow, and shoulder. Gentle forearm turning	Active elbow, wrist, and forearm turning, to full range	Full range, with stretches	Full range
Load	Nothing in the hand	A cup of tea, building to 1 kg	Progressive strengthening, up to 5 kg	Unrestricted once the bones have united
Review	Wound check and X-ray at 2 weeks	Clinic and X-ray at 6 weeks	Clinic and X-ray at 12 weeks	X-ray until united

Darker shading means tighter restriction. Times are guides. Your surgeon's instructions take precedence where they differ.

Seek advice urgently if

- Severe, rising pain in the forearm with tight swelling, worse when the fingers are stretched. This is an emergency. Go to the Emergency Department.
- The wound becomes red, hot, or swollen, or it leaks or opens.
- You have a fever or feel unwell.
- Pain suddenly increases or the forearm changes shape, especially after a fall.
- New numbness, tingling, or weakness develops in the hand.
- The hand becomes cold, pale, or blue.

Call 999 or go to the Emergency Department for shortness of breath or chest pain.

For anything else on this list, contact your surgical team the same day. Out of hours, call NHS 111.

Phase 1

Protect: weeks 0 to 2

Aims: control swelling, keep the fingers, elbow, and shoulder moving, protect the wounds.

Do

- Keep the hand raised above the heart for the first 48 to 72 hours.
- Make a full fist and straighten the fingers fully, ten times every hour.
- Bend and straighten the elbow, and move the shoulder fully.
- Turn the palm up and down gently, within comfort, if the dressing allows.
- Use the sling for comfort for the first few days only.
- Keep the dressings dry until the wound check.

Avoid

- Lifting or carrying with the operated hand.
- Pushing up from a chair with the hand.
- Letting the hand hang down for long periods.
- Driving.

Expected in this phase

The forearm and hand swell. Pain should ease day by day. Pain that rises sharply, with a tight forearm, needs emergency review.

Phase 2

Move: weeks 2 to 6

Aims: regain elbow, wrist, and forearm movement, return to light daily tasks.

Do

- Turn the palm up and down with the elbow tucked into your side. This is the movement that is hardest to regain.
- Bend the wrist forwards and back.
- Regain a fully straight and fully bent elbow.
- Use the hand for light tasks: eating, typing, dressing.
- Massage the scars once the wounds have fully healed.

Avoid

- Lifting more than 1 kg.
- Twisting against resistance: jars, taps, screwdrivers.
- Body weight through the hand.
- Any activity with a risk of falling.
- Resistance exercise.

Move on to Phase 3 when

The six-week X-ray shows the fixation is unchanged and the bones are healing.

Phase 3

Strengthen: weeks 6 to 12

Aims: full movement, grip and forearm strength.

Do

- Stretch forearm turning to the end of range. Use the other hand to help.
- Build grip with putty, then a gripper.
- Strengthen the wrist and forearm with light weights, then bands.
- Take weight through the hand in stages: table lean, then wall press.
- Return to running and swimming.

Avoid

- Lifting more than 5 kg.
- Forceful twisting and levering.
- Contact sport and activities with a risk of falling.
- Heavy manual work.

Move on to Phase 4 when

X-ray shows both bones have united. This can take longer than twelve weeks.

Phase 4

Return: after 12 weeks

Aims: full work, full sport, no restrictions.

- Progress to heavy lifting and full weight through the hand.
- Return to heavy manual work once union is confirmed.
- Return to contact sport in stages once union is confirmed.

The plates

The plates usually stay in for life. Removal is not routine. The bone can break again through the old screw holes after removal, so it is done only for a clear reason.

Return to activity

Typical times from surgery. Each depends on comfort, movement, and healing.

Activity	From	Condition
Desk work	1 to 2 weeks	One-handed at first
Driving	4 to 6 weeks	Able to grip and turn the wheel. Tell your insurer.
Running	4 to 6 weeks	Comfortable arm swing
Swimming	6 weeks	Wounds healed, gentle strokes
Light gym resistance	6 weeks	Satisfactory six-week X-ray
Light manual work	8 weeks	Within the 5 kg limit
Golf, racket sports	12 weeks	Union on X-ray
Cycling	12 weeks	Union on X-ray
Heavy manual work	12 to 16 weeks	Union on X-ray
Contact sport	4 to 6 months	Union on X-ray and staged return

When to slow the protocol

Some patients need more time. Your surgeon will tell you if any of these apply.

- **Fracture with a dislocated joint at the wrist or elbow.** Forearm turning is limited in a splint or cast for four to six weeks. Your surgeon will set the safe range.
- **Open fracture, or a fracture fixed with bone graft.** Healing is slower. Each phase runs later, guided by X-ray.
- **A single bone fixed after a direct blow.** The same phases apply, and healing of the ulna can be slow.
- **Smoking and diabetes.** Both slow healing. Stop smoking and vaping nicotine. Keep blood sugar well controlled.

Prof. Mohamed A. Imam

Consultant Orthopaedic Surgeon

Rowley Bristow Orthopaedic Centre, Ashford and St Peter's Hospitals NHS Foundation Trust

www.TheArmDoc.co.uk

This protocol is general guidance for uncomplicated plate fixation of forearm shaft fractures. It is not a substitute for individual medical advice. Instructions from your own surgeon and therapist take precedence.

Version 1.0, October 2026. Review due October 2028.