

Post-operative rehabilitation protocol

Metacarpal and finger fracture fixation

Plate or screw fixation of a broken bone in the hand or finger. For patients, hand therapists, and GPs.

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The plan at a glance

The fixation is strong enough to allow early movement. Early movement is the point of the operation. A healed bone in a stiff finger is a poor result.

	Phase 1 Weeks 0 to 2	Phase 2 Weeks 2 to 6	Phase 3 After 6 weeks
Splint	Splint between exercises	Splint or buddy strap outdoors and at night until week 4	None. Buddy strap for sport
Movement	Active movement of the injured finger, as taught	Full fist and full straightening	Full range, with stretches
Load	Nothing in the hand	A cup of tea, building to 1 kg	Progressive grip strengthening
Review	Hand therapy in the first week. Wound check and X-ray at 2 weeks	Clinic and X-ray at 6 weeks	Discharge when united and moving

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

Seek advice urgently if

- The wound becomes red, hot, or swollen, or it leaks or opens.
- You have a fever or feel unwell.
- The finger crosses over or under its neighbour when you make a fist.
- Pain suddenly increases or the finger changes shape, especially after a knock.
- The fingertip becomes numb.
- The dressing, splint, or cast feels too tight, or the fingers become cold, pale, blue, or very swollen.

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 and move: weeks 0 to 2

Aims: control swelling, start movement, protect the wound.

Do

- Keep the hand raised above the heart for the first 48 to 72 hours.
- Attend hand therapy in the first week for a moulded splint and exercises.
- Take the splint off to exercise, every one to two hours.
- Bend and straighten the injured finger under its own power, as taught.
- Bend each joint in turn (tendon gliding).
- Move the other fingers, the thumb, and the wrist fully.
- Keep the wound dry until the wound check.

Avoid

- Gripping, lifting, or carrying with the operated hand.
- Forcing the finger with the other hand.
- Letting the hand hang down for long periods.
- Driving.

Expected in this phase

The hand swells over the back and the fingers feel tight. Swelling is the main cause of stiffness. Elevation and regular movement are the treatment.

Phase 2

Regain movement: weeks 2 to 6

Aims: full fist, full straightening, light daily use.

Do

- Work towards a full fist and a fully straight finger.
- Wear the splint or a buddy strap outdoors and at night until week four.
- Use the hand for light tasks: eating, typing, dressing.
- Massage the scar firmly once the wound has healed.
- Start gentle stretches with the other hand from week four.

Avoid

- Lifting more than 1 kg.
- Gripping hard or punching.
- Any activity with a risk of a knock or a fall.
- Sport.

Move on to Phase 3 when

The six-week X-ray shows the bone is healing and the fracture site is not tender.

Phase 3

Strengthen and return: after 6 weeks

Aims: grip strength, full work, full sport.

- Build grip with putty, then a gripper.
- Stretch any joint that remains stiff. See your therapist if movement stalls.
- Return to heavy manual work at eight to twelve weeks.
- Return to contact sport at eight to twelve weeks, with the finger buddy strapped for the first month.

What to expect

Swelling around the knuckle or finger can last three to six months. A plate on the back of the hand can be felt under the skin. It is removed only if it catches the tendon or limits movement.

Return to activity

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

Activity	From	Condition
Desk work	A few days to 1 week	One-handed at first
Running	2 weeks	Splint on, safe ground
Driving	2 to 4 weeks	Able to grip the wheel firmly without pain
Swimming	4 weeks	Wound healed
Light manual work	4 to 6 weeks	Within the 1 kg limit, then building
Gym, golf, racket sports	6 to 8 weeks	Healing on X-ray, comfortable grip
Heavy manual work	8 to 12 weeks	Good grip strength
Contact sport	8 to 12 weeks	Healing on X-ray, buddy strap

Changes to the protocol

Your surgeon will tell you whether any of these apply.

- **Fixation with wires.** The finger is splinted full time. The wires stay for three to four weeks. Keep the pin sites clean and dry. Movement of the wired joint starts after the wires come out.
- **Fracture into a joint.** Movement is even more important, but loading is delayed to eight weeks.
- **Tendon or nerve repair at the same operation.** The tendon protocol takes precedence.
- **Open fracture or crush injury.** Swelling and stiffness are greater. Expect therapy for three months.
- **Smoking and diabetes.** Both slow healing. Stop smoking and vaping nicotine. Keep blood sugar well controlled.

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

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