

Post-operative rehabilitation protocol

Proximal humerus fracture fixation (ORIF)

Plate fixation of a fracture at the top of the arm bone, at the shoulder. For patients, physiotherapists, and GPs.

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The plan at a glance

The plate holds the bone, and the tendons attached to it, while they heal. Assisted movement starts early to prevent stiffness. Unaided lifting waits six weeks. Strengthening waits twelve.

	Phase 1 Weeks 0 to 2	Phase 2 Weeks 2 to 6	Phase 3 Weeks 6 to 12	Phase 4 After 12 weeks
Sling	On day and night, off for exercises	On between exercises, wean from week 4, off by week 6	None	None
Movement	Pendulums. Assisted lift to 90°, outward turn to 30°	Assisted only. Lift as comfort allows, outward turn to 30°	Active, unaided. Building to full range	Full range, stretch the end of range
Load	A cup of tea, elbow at the side	A cup of tea, elbow at the side	Up to 2 kg, static strengthening only	Progressive resistance strengthening
Review	Wound check and X-ray at 2 weeks	Clinic and X-ray at 6 weeks	Clinic and X-ray at 12 weeks	Clinic at 6 and 12 months

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.
- Pain suddenly increases, movement you had gained is lost, or a new clunk, grinding, or change in shape appears, especially after a fall.
- New numbness, tingling, or weakness develops in the arm or 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 pain and swelling, protect the fixation and the wound, start gentle assisted movement.

Do

- Wear the sling day and night. Take it off to wash, dress, and exercise.
- Move the fingers, wrist, and elbow fully, several times a day.
- Keep the neck moving and the shoulder blades set back. Do not slouch into the sling.
- Start pendulum exercises from day one.
- Lying on your back, lift the operated arm with the other hand to 90° (pointing at the ceiling), within comfort.
- With the elbow at your side, turn the forearm outwards with a stick to 30°.
- Wash under the arm by leaning forward and letting the arm hang.
- Sleep propped up on pillows, with a pillow behind the elbow.
- Take pain relief regularly as prescribed. Ice over the dressing, wrapped in a cloth, for 15 to 20 minutes helps.
- Keep the dressing dry and in place until the wound check at 10 to 14 days.

Avoid

- Lifting the arm unaided.
- Lifting anything heavier than a cup of tea.
- Turning the arm outwards beyond 30°.
- Reaching behind your back.
- Pushing up from a chair or bed with the operated arm.
- Lying on the operated side.
- Soaking the wound in a bath.
- Driving.

Expected in this phase

Bruising often spreads down the arm to the elbow and across the chest. The hand and forearm may swell. Keep the fingers moving and the hand raised in the sling.

Phase 2

Move with help: weeks 2 to 6

Aims: regain movement with assistance, protect the healing bone and tendons, come out of the sling.

Do

- Wear the sling between exercises. Wean from week four. Discard it by six weeks.
- Continue pendulums and assisted lifting. Go beyond 90° as comfort allows.
- Use a stick, a pulley, or table slides. The other arm does the work.
- Keep the outward turn to 30°.
- Continue shoulder blade control and posture work.
- Use the hand at waist level with the elbow at your side: eating, typing, dressing.
- Massage the scar once the wound has fully healed.

Avoid

- Lifting the arm unaided, forwards or sideways.
- Lifting anything heavier than a cup of tea.
- Turning outwards beyond 30° or reaching behind your back.
- Taking body weight through the arm.
- Any activity with a risk of falling.
- Forcing movement into pain.

Move on to Phase 3 when

The six-week X-ray shows the fixation is unchanged and the bone is healing, and assisted lifting reaches beyond shoulder height.

Phase 3

Active movement: weeks 6 to 12

Aims: lift the arm unaided, regain full range, return to light daily tasks.

Do

- Stop using the sling.
- Start lifting the arm unaided. Begin lying down, then sitting, then standing.
- Stretch gently into outward turn and reaching behind the back. The 30° limit no longer applies.
- Add static (isometric) rotator cuff and deltoid exercises, without pain.
- Use the arm for light tasks, first to shoulder height, then above.
- Exercise in a pool once the wound has healed. The water supports the arm.
- Keep fit: walking and a static bike are safe.

Avoid

- Lifting more than 2 kg.
- Resistance exercise: bands, weights, machines.
- Taking body weight through the arm: press-ups, pushing up from a chair, crutches.
- Sudden or jerking movements.
- Any activity with a risk of falling.
- Heavy manual work and all sport.

Move on to Phase 4 when

The 12-week X-ray shows the bone has united, and you can lift the arm above shoulder height without hitching the shoulder.

Phase 4

Strengthen and return: after 12 weeks

Aims: restore strength, return to work and sport.

- Start resistance work with bands, then light weights. Build load gradually.
- Strengthen the rotator cuff, deltoid, and the muscles that control the shoulder blade.
- Keep stretching the end of range, above the head and behind the back.
- Introduce weight through the arm in stages: wall press, then incline press, then floor work.
- Add sport-specific drills from four months.

What to expect

Recovery is slow. Most of the gain comes in the first six months. Improvement continues for 12 to 18 months. Some loss of movement above the head and behind the back is common, even when the fracture heals well. The plate usually stays in for life. It can be removed if it causes trouble, but not before 12 months after surgery.

Return to activity

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

Activity	From	Condition
Walking	Day one	Sling on, take care on stairs and uneven ground
Desk work	2 to 4 weeks	One-handed, in the sling, when pain is controlled
Static bike	4 weeks	Sling on, no weight through the arm
Driving	6 to 8 weeks	Out of the sling, able to control the wheel and make an emergency stop. Tell your insurer.
Light tasks to shoulder height	6 weeks	Satisfactory six-week X-ray
Running	10 to 12 weeks	Comfortable active movement
Light manual work	12 weeks	Union on X-ray
Light gym resistance	12 weeks	Union on X-ray
Swimming, breaststroke	12 weeks	Active lift above shoulder height
Golf	4 months	Putting and chipping from 12 weeks
Road cycling	4 months	Union on X-ray and good strength
Swimming, front crawl	4 months	Full or near-full range
Racket sports	4 to 6 months	Good range and strength
Heavy manual work	4 to 6 months	Good range and strength
Contact sport, skiing, horse riding	6 months	Union on X-ray and staged return

When to slow the protocol

Some fractures and fixations need more time. Your surgeon will tell you if any of these apply.

- **Weak bone, a fragmented fracture, or bone fragments held with stitches.** Stay in the sling for the full six weeks. Delay unaided lifting to eight weeks.
- **Fracture with dislocation, or a fracture through the ball of the joint.** The blood supply to the ball is at risk. X-ray review continues for two years.
- **Fixation with a nail.** The same phases apply.
- **Smoking and diabetes.** Both slow bone healing. Stop smoking and vaping nicotine. Keep blood sugar well controlled.
- **Leg injury needing crutches or a frame.** Weight through the operated arm needs your surgeon's specific approval.
- **Bone health.** If you are over 50 and the fracture followed a simple fall, ask your GP about a bone health assessment.

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This protocol is general guidance for uncomplicated plate fixation of a proximal humerus fracture. It does not cover shoulder replacement or fractures treated without surgery. It is not a substitute for individual medical advice. Instructions from your own surgeon and physiotherapist take precedence.

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