

Post-operative rehabilitation protocol

Pectoralis major transfer for serratus anterior palsy

Transfer of part of the chest muscle to the tip of the shoulder blade, to stop it winging. 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

Part of the pectoralis major is moved, usually lengthened with a tendon graft, to hold the shoulder blade flat against the chest wall. It needs six weeks protected in a sling to heal. The muscle then learns to work as you lift the arm.

	Phase 1 Weeks 0 to 6	Phase 2 Weeks 6 to 12	Phase 3 Months 3 to 6	Phase 4 After 6 months
Sling	On day and night, off for exercises	Wean off over 1 to 2 weeks	None	None
Movement	Pendulums. Assisted lift to 90° lying down, from week 2	Assisted, then active lift. Retraining starts	Full active range. Shoulder blade control	Full range
Load	A cup of tea, elbow at the side	A cup of tea	Light resistance, up to 2 kg	Progressive strengthening
Review	Wound check at 2 weeks. Clinic at 6 weeks	Clinic at 12 weeks	Clinic at 6 months	Clinic at 12 months

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

Seek advice urgently if

- A wound becomes red, hot, or swollen, or it leaks or opens.
- You have a fever or feel unwell.
- You feel a pop at the chest or the shoulder blade, and the winging returns.
- The chest wall or the armpit swells rapidly.
- 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 6

Aims: let the transfer heal, control pain, keep the hand and elbow moving.

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.
- Start pendulum exercises when comfortable.
- From week two, lying on your back, lift the arm with the other hand to 90°. The bed holds the shoulder blade flat.
- Sleep on your back, propped up, with a pillow under the arm.
- Keep the wounds dry until the wound check: at the front of the armpit, at the tip of the shoulder blade, and on the thigh if a graft was taken there.

Avoid

- Lifting the arm under its own power.
- Turning the arm outwards beyond 30° or taking it out to the side and back.
- Pushing: doors, chair arms, getting out of bed.
- Lifting anything heavier than a cup of tea.
- Lying on the operated side.
- Driving.

Expected in this phase

Bruising spreads across the chest and down the arm. If a graft was taken from the outer thigh, the thigh is sore and may bulge slightly when you tense it.

Phase 2

Move and retrain: weeks 6 to 12

Aims: come out of the sling, lift the arm unaided, begin retraining.

Do

- Wean out of the sling over one to two weeks.
- Lift the arm with help, then under its own power, lying down first.
- Start retraining: press the palms gently together in front of the chest as you lift the arms.
- Progress to lifting in sitting and standing, watching the shoulder blade in a mirror.
- Stretch outward turning gently.
- Exercise in a pool once the wounds have healed.

Avoid

- Lifting anything heavier than a cup of tea.
- Pushing and press-up movements.
- Resistance exercise.
- Forced stretching of the arm out and back.
- Any activity with a risk of falling.

Move on to Phase 3 when

Twelve weeks have passed and you can lift the arm lying down without the shoulder blade winging.

Phase 3

Strengthen: months 3 to 6

Aims: a shoulder blade that stays flat through full movement, light strength.

Do

- Lift the arm in standing with the shoulder blade controlled.
- Start gentle pushing against a wall, reaching the shoulder blades forward at the end.
- Add light resistance bands for the shoulder and shoulder blade.
- Strengthen the rotator cuff and deltoid.
- Use the arm for daily tasks at and above shoulder height.

Avoid

- Lifting or carrying more than 2 kg.
- Floor press-ups, bench press, and dips.
- Heavy overhead work.
- Heavy manual work and sport.

Move on to Phase 4 when

Six months have passed and the shoulder blade stays flat when you lift and push.

Phase 4

Return: after 6 months

Aims: best possible strength, return to work and activity.

- Progress pushing: incline press, then floor press-ups.
- Return to swimming, the gym, and non-contact sport.
- Discuss heavy manual work and contact sport with your surgeon before returning.

What to expect

Improvement continues for 12 months. The aims are a shoulder blade that no longer wings, less pain, and a stronger lift overhead. The chest looks slightly different on that side.

Return to activity

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

Activity	From	Condition
Desk work	3 to 4 weeks	One-handed, in the sling
Light tasks at waist level	6 weeks	Out of the sling
Driving	8 to 10 weeks	Out of the sling, able to control the wheel. Tell your insurer.
Pool exercise	8 weeks	Wounds healed
Running	12 weeks	Shoulder blade controlled
Light manual work	4 months	Within the 2 kg limit, then building
Light gym resistance	4 months	No heavy pressing
Swimming	6 months	Breaststroke first
Press-ups, bench press	6 months	Staged return
Heavy manual work, contact sport	6 to 9 months	Discuss with your surgeon

When to slow the protocol

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

- **Weak tissue at the shoulder blade, or a graft under tension.** A brace that holds the shoulder blade is used for six weeks. Assisted lifting starts later.
- **Long-standing winging with a stiff shoulder.** Regaining movement takes longer.
- **Weakness of the trapezius as well.** The result is less predictable. Your surgeon will set specific goals.
- **Graft taken from the thigh.** Walking is unrestricted. Running waits six weeks.
- **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 pectoralis major transfer for serratus anterior palsy. 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.