

Post-Operative Shoulder Rehabilitation

These multidisciplinary guidelines form the basis of a progressive rehabilitation programme. These are general guidelines for the most common shoulder surgical procedures and are not designed to replace sound clinical reasoning. Any specific instructions from the consultant orthopaedic team either verbally or in post-operative notes must take precedence.

Rehabilitation Goals

- Preserve the integrity of surgical repair
- Restoration of functional range of movement
- Restoration of Rotator Cuff (RC) and scapula control through range
- Restore proprioceptive acuity
- Prevent compensatory movement patterns that may compromise recovery

Principles of Post-operative shoulder rehabilitation

The following should be considered at all times throughout the rehabilitation process:

- Good communication with the consultant team is paramount to a successful outcome for the patient.
- Comprehensive pain control should be in place and supported prior to discharge from hospital. Patients should be educated regarding appropriate levels of pain, particularly in response to exercise to reduce fear and anxiety.
- Cervical spine, elbow, wrist and hand activity should be maintained throughout.
- Quality of movement should not be sacrificed in the pursuit of range.
- Progression should follow the basic principles of rehabilitation from passive (PROM), active assisted (AAROM), active (AROM), isometric and resistance training.
- Rehabilitation programmes should only include 2-4 exercises. Too many exercises will affect adherence.
- Consider using short lever movements or closed kinetic chain (CKC) positions in appropriate situations.
- Consider incorporating functional movements whenever possible – for example use of the hand for specific occupational or sports activities.
- Functional milestones are for guidance only. Patients should not be accelerated through time markers without discussion with a member of the consultant team. Similarly, range, control and strength goals must be met before patients are deemed ready for progression, regardless of whether or not they have reached the time marker.
- The law states that patients **MUST** be in full control of a car before returning to driving. It is the patient's responsibility to ensure this and to inform their insurance company of their surgery.

Criteria for progression

Criteria for progression of exercise should always be based on:

- Ability to perform a movement with the correct movement pattern
- The patient being able to maintain good rotator cuff and scapula control – there should be no evidence of significant scapula winging or humeral head translation.
- Evidence that movement can be performed without compensatory muscle patterning (particularly Pectoralis Major and Latissimus Dorsi)

Posterior Stabilisation

	Day 0	0-2 weeks	2-4 weeks	4-6 weeks	6-12 weeks	12weeks +
Advise	<p>Sling/collar & cuff for 4/52 only to be removed for axillary hygiene and exercises. Patients may be placed in an external rotation brace and will require additional guidance regarding compliance</p> <p>Neck /elbow/wrist/hand movements</p> <p>Pendular exercises</p>	Continued sling use and initial exercises	Continued sling use and initial exercises	<p>At 4/52 gradually wean out of sling during day. Continue to wear at night for comfort as required</p> <p>Regain scapula & glenohumeral stability working for shoulder joint control rather than range</p> <p>Gradually increase ROM</p> <p>Strengthen rotator cuff muscles</p> <p>Increase proprioception through open & closed chain exercise</p>	<p>Gradual weaning from sling</p> <p>Gradual introduction of ROM exercises from PROM-AAROM-AROM</p> <p>Consider:-</p> <ul style="list-style-type: none"> • Kinetic chain integration • Early CKC work • Early Cuff and scapula recruitment through range • Functional movements with correct movement pattern <p>After 2 months any residual tightness to internal rotation may be addressed by specific stretching exercises</p>	<p>Functional active range of movement and strength</p> <p>Cuff and scapula recruitment through range. Patients should be able to achieve adequate ER (60-70%) before introducing resisted cuff activity above 90°</p> <p>Incorporate sports/occupational specific rehab as required ensuring sufficient through range dynamic control (including eccentric control)</p>
Avoid	<p>AVOID:-</p> <ul style="list-style-type: none"> • Flexion/Internal Rotation 				<p>AVOID:-</p> <ul style="list-style-type: none"> • Loading activities without the necessary strength control 	<p>AVOID:-</p> <ul style="list-style-type: none"> • Loading activities without the necessary strength and control

Key clinical points

- Soft tissue healing is the priority following repair as the repair is only as strong as the sutures holding it in place.
- Patients with rapid progression and little pain must be educated to avoid premature loading.
- Remodelling of soft tissue is not established until 16/52 and careful progression of loading is necessary to avoid compromise to the surgical repair.
- Strength exercises should only be introduced in accordance with the principles of rehabilitation e.g.
 - Ability to perform a movement with the correct movement pattern
 - The patient being able to maintain good rotator cuff and scapula control
 - Evidence that movement can be performed without compensatory muscle patterning
- Patients may require support to modify their expectations and lifestyle to maximise long term function