

# **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)

## Rotator Cuff Repair (Standard)

|               | Day 0                                                                                                                                                          | 0-2 weeks                                                                                                                                 | 2-4 weeks                                                                                                                                                                      | 4-6 weeks                                                                                                                                                                                                                 | 6-12 weeks                                                                                                                                                                                                                                | 12weeks +                                                                                                                                                                                                                                                                                                                              |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Advise</b> | <p>Sling/collar &amp; cuff for 6/52 only to be removed for axillary hygiene and exercises</p> <p>Neck/elbow/wrist/hand movements</p> <p>Pendular exercises</p> | <p>Continue with sling/collar &amp; cuff as instructed</p> <p>Continue with neck/elbow/wrist/hand movements</p> <p>Pendular exercises</p> | <p>Supported/passive flexion &lt;90° e.g.</p> <ul style="list-style-type: none"> <li>• Table slides</li> <li>• Walk backs</li> </ul> <p>ER to neutral (handshake position)</p> | <p>Gradually wean out of sling</p> <p>Light activities only should be performed – as a guideline no more than the weight of a cup of tea within field of vision, using short lever positions.</p> <p>Active ER to 30°</p> | <p>Progress functional ROM from supported/assisted ROM to AROM.</p> <p>Sufficient ER should be achieved to allow sage progression of elevation</p> <p>Gradual introduction of ABD/ER positions</p>                                        | <p>Progress functional active range of movement, strength and endurance</p> <p>Progress cuff and scapula recruitment through range – isometrics in varying starting positions could be considered</p> <p>Progress kinetic chain integration</p> <p>Return to work/sport – gradually over a further 12/52 depending on requirements</p> |
| <b>Avoid</b>  | <p><b>AVOID:-</b></p> <ul style="list-style-type: none"> <li>• Combined ABD/ER</li> </ul>                                                                      |                                                                                                                                           |                                                                                                                                                                                |                                                                                                                                                                                                                           | <p><b>AVOID:-</b></p> <ul style="list-style-type: none"> <li>• Forced end range stretching/mobilisation</li> <li>• OKC long lever exercises</li> <li>• Lifting/loading</li> <li>• Weight bearing (e.g. getting out of a chair)</li> </ul> |                                                                                                                                                                                                                                                                                                                                        |

### Key clinical points

- Soft tissue healing is the priority following RCR with the repair only as strong as the sutures holding it in place.
- Risk of re-tear is highest within the first 12 weeks – particularly in older patients, those with larger tears (>3cm), smokers and diabetics.
- 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, for example:
  - 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