

Introduction

The guidelines that follow are a frame work of basic exercises and management strategies based on the patient who has had a posterior stabilisation.

The physiotherapy programme will need to be **individualised** for each patient, all exercises should be performed without pain and the details of specific restrictions will be in the post-operative instructions. If you have not received these please ring the consultant's secretary.

Emphasise to the patient the importance of protecting the repair to allow soft-tissue healing in the first two phases. The milestones may be used to assess whether you feel the patient is making good progress or not.

Shoulder rehabilitation is more than strength-training of the shoulder muscles alone. The (neuromuscular) rehabilitation addresses the whole shoulder girdle, upper extremity, core stability and training of the kinetic chain.

Phase 1 (1-14 days)

Goals:

- Maintain integrity of the repair
 - External rotation brace at all times except while dressing/washing or doing exercises
 - Teach sling, dressing and personal hygiene techniques
- Management of pain, inflammation and muscle inhibition
 - Analgesics, NSAID's, ice, sling, passive movement and posture
- Teach shoulder girdle control/setting and relaxation
 - Retraction and depression
- Gradually increase PROM **as tolerated/not into pain/do not force or stretch**
 - Pendulum in neutral rotation
 - ER (from neutral outwards)
- Hand, wrist, elbow and neck range of movement (ROM) exercises as required
- Advice on sleeping position
 - Wearing sling, if supine use a pillow beneath the elbow to prevent the shoulder resting in extension
- Prevent muscle atrophy
 - Sub-maximal, pain-free isometrics in neutral (<30% Maximal Voluntary Contraction) as tolerated

Precautions:

- Sling usually for 3-6 weeks (check post-operative note)
- Avoid combined forward flexion (FF) and internal rotation (IR) usually for 6 weeks (check post-operative note)
- No lifting of objects
- No excessive stretching or sudden movements
- No supporting of body weight by hands
- Keep wounds clean and dry
- No driving for: right 3 weeks, left 6 weeks

Milestones:

- Pain, inflammation and muscle inhibition well managed
- Return to pre-operative sleep patterns
- Good scapula setting
- PROM: elevation in neutral to 90°, IR to neutral

Phase 2 (day 15-6 weeks)

Goals:

- Allow healing of soft tissue – do not over-load healing tissue
- Continue to manage and reduce pain, inflammation and muscle inhibition
 - As phase 1
 - Alternate treatment strategies as appropriate e.g. manual therapy techniques, taping
- Once stitches have been removed begin scar massage
- Gradually restore full, pre-op PROM (except FF and IR) **as tolerated/not into pain/do not force or stretch**

- Refer to post-op note for further specific restrictions
- Introduce active-assisted range of movement (AAROM) gradually progressing to active range of movement (AROM) **as tolerated/not into pain**
 - Refer to post-op note for further specific restrictions
- Re-establish dynamic shoulder stability
 - Ensure good SHR through PROM and use it to guide progression of AAROM and AROM

Precautions:

- Avoid combined forward flexion (FF) and internal rotation (IR) usually for 6 weeks (check post-operative note)
- No lifting of objects
- No excessive shoulder extension
- No excessive stretching or sudden movements
- No supporting of body weight by on operated upper limb
- Usually wean out of the sling after 4-6 weeks (check post-operative note)

Milestones at 6 weeks:

- Pain, inflammation and muscle inhibition well managed
- Pre-operative PROM except IR and horizontal flexion
- Passive IR 25% of pre-operative range
- Good SHR with PROM

Phase 3 (7-14 weeks)**Goals:**

- Full PROM
 - Introduce multi-directional stretching into end of range **as tolerated/not into pain**
- Gradually restore pre-operative AAROM and then AROM with good SHR **as tolerated/not into pain**
- Gradually introduce and progress shoulder strengthening **as tolerated/not into pain**
 - Introduce scapular stabilisation exercises
 - Introduce cuff strengthening, progressing to maximal isometrics then to isotonic strengthening
 - Introduce proprioceptive exercises
 - Gradually progress to shoulder and upper limb strengthening **as long as the patient is able to elevate the arm without the shoulder or scapular ‘hitching’**
 - Gradually progress to dynamic and rhythmic stabilisation exercises
- Gradually progress lower limb and core strengthening as required
- Gradually return to light, non-repetitive functional activities
- Gradually introduce light, early-stage sport-specific exercises
- Return to driving, right 6 weeks, left 8 weeks

Precautions:

- Avoid excessive loading of shoulder
 - No heavy lifting
 - No prolonged, repetitive upper limb activities

Milestones at 14 weeks:

- Resolved pain, inflammation and muscle inhibition
- AROM with good SHR through elevation to 100% of pre-operative range
- Passive IR to 75% of pre-operative range

Phase 4 (3-6 months)**Goals:**

- Maintain full PROM
 - Continue multi-directional stretching into end of range **as tolerated/not into pain**
 - Capsular stretches
- Full pre-operative AROM with good SHR **as tolerated/not into pain**
- Progress shoulder strengthening **as tolerated/not into pain**

- Progress cuff strengthening and scapular stabilisation exercises
- Progress proprioceptive exercises
- Progress shoulder and upper limb strengthening ensuring good SHR
- Progress dynamic and rhythmic stabilisation exercises
- Progress lower limb and core strengthening as required
- Gradually progress functional activities
- Gradually progress sport-specific exercises

Precautions:

- Continue to avoid excessive loading of shoulder
 - No heavy, repetitive or prolonged overhead activities

Milestones at 6 months:

- Full pain-free motion and rotator cuff strength restored

Phase 5 (6-9 months)**Goals:**

- As phase 4
- Gradual return to strenuous work activities as required
- Gradual return to contact sports as required

Circle Bath Specialist Orthopaedic Shoulder Team

Mr G Jennings (TR & Orth), Mr S Gregg-Smith (TR & Orth), Mr A Chambler (TR & Orth), Mr S Kumar (Ortho) and Mr U Butt (Orth).

To contact the Consultants Secretaries, call Circle Bath Hospital on 01761 422222 or to contact the Physiotherapy team call 01761 422388.