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Shoulder Arthroplasty (total, hemi and Resurfacing procedures)

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INTRODUCTION

The physiotherapy programme will need to be **individualised** for each patient, all exercises should be performed without pain.

Some restrictions are placed on the subscapularis muscle for a while as it is completely divided and reattached at the end of the operation and needs time to heal. 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 prosthesis 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.

POST SURGERY

Phase I (1 – 28 days)

Goals:

- Maintain integrity of the prosthesis and soft-tissues
 - Sling 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 shoulder passive range of movement (PROM) **as tolerated/not into pain/do not force or stretch**
 - Pendulum, Cradled position with good SHR
- Hand, wrist, elbow and neck range of movement (ROM) exercises as required
- Prevent muscle atrophy
 - Introduce sub-maximal, pain-free rotator cuff (except internal rotation) isometrics in neutral (<30% MVC) as tolerated
- Advice on sleeping position
 - Wearing sling, if supine use a pillow beneath the elbow to prevent the shoulder resting in extension
- Once stitches have been removed begin scar massage

Precautions:

- Sling usually for 4 weeks (check post-operative note)
- No external rotation beyond 20°
- No resisted internal rotation
- No lifting of objects
- No excessive shoulder extension
- No excessive stretching or sudden movements
- No supporting of body weight by hands
- No driving (right 6 weeks, left 8 weeks)
- Keep wounds clean and dry

Milestones at 4 weeks:

- Pain, inflammation and muscle inhibition well managed
- Return to pre-operative sleep patterns
- Good scapula setting
- PROM: shoulder ER to neutral and Flexion to 60°

Phase 2 (5 weeks – 8 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. soft tissue techniques, taping
- Gradually progress PROM, AAROM and AROM **as tolerated/not into pain/do not force or stretch**
- Re-establish dynamic shoulder stability ○ Good SHR through PROM, progressing to AAROM then AROM
- Gradually progress isometrics, introducing internal rotation **as tolerated/not into pain**
- Gradually introduce lower limb and core strengthening as required Gradually return to light, non-repetitive functional activities

Precautions:

- Usually wean out of the sling after 4 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 hands
- No driving (right 6 weeks, left 8 weeks)

Milestones at 8 weeks:

- Pain, inflammation and muscle inhibition well managed
- AAROM flexion 90°, external rotation 30°
- Good SHR with PROM
- Good SHR with PROM

Phase 3 (9 weeks - 14 weeks)

Goals:

- Maximise PROM
 - Introduce multi-directional stretching into end of range **as tolerated/not into pain**
- Gradually restore AAROM and then AROM with good SHR **as tolerated/not into pain**
- Gradually introduce and progress shoulder strengthening **as tolerated/not into pain**
 - Introduce cuff strengthening, progressing to maximal isometrics then to isotonic strengthening
 - Introduce scapular stabilisation exercises
 - Introduce proprioceptive exercises
 - Gradually progress to dynamic and rhythmic stabilisation exercises
- Gradually progress lower limb and core strengthening as required
- Gradually progress functional activities
- Gradually introduce light, early-stage sport-specific exercises

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 external rotation to 100% 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**
- 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 biceps strengthening

- Progress lower limb and core strengthening as required
- Gradually progress sport-specific exercises

Precautions:

- Avoid excessive loading of shoulder
 - No heavy lifting away from body
 - No prolonged, repetitive overhead activities

Milestones at 6 months:

- Full pain-free motion and rotator cuff strength restored

Phase 5 (6 – 12 Months)

Goals:

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

