Rehabilitation Guidelines for Post-Operative Stiff Shoulder

Please note that this is advisory information only. Your experiences may differ from those described. A fully qualified Physiotherapist must demonstrate all exercises to a patient.

We cannot be held liable for the outcome of you undertaking any of the exercises shown here independently of direct supervision from the RNOH. Please read these guidelines with consideration to the specific physiotherapy discharge report that will be sent to the physiotherapist concerned. There may be individual variation that is patient specific in which case these general guidelines will have to be modified as appropriate by the physiotherapist.

The RNOH Shoulder and Elbow Unit have decided to produce rehabilitation guidelines loosely based on the Matsen classification of shoulder dysfunction rather than for individual surgical procedures. The Matsen classification groups shoulder dysfunction into rough shoulders, unstable shoulders, weak shoulders and stiff shoulders.

At Stanmore, our emphasis is patient-specific, not condition-specific rehabilitation which encourages recognition of those patients who may progress slower than others. We also wanted to encourage clinical reasoning based on the continuum concept of shoulder rehabilitation i.e. similar rehabilitation tools are used for each shoulder procedure but the time of intervention varies according to the status of the tissues at pre-op, at surgery and post-op restrictions.

Our hope is that this will promote an equitable rehabilitation service to all of our patients and improve the overall understanding of the unique challenges rehabilitation of the shoulder complex presents.

You will notice that the rehabilitation guidelines encourage rehabilitation at a slower rate than other guidelines e.g. GOST guidelines, Liverpool. This is a reflection of the complexity of patients treated here at Stanmore.

Passive ROM is utilised to settle irritability when present and to avoid muscle guarding that early active movements can create. They should be continued until the shoulder is no longer at risk of losing ROM.

This guideline groups the rehabilitation of arthroscopic capsular release, manipulation under anaesthetic and arthroscopic subacromial decompression as all demonstrate components of stiffness.
Arthroscopic capsular release (ACR)/Manipulation under anaesthetic (MUA)

Surgical Indications
- Idiopathic/secondary stiff shoulder
- Soft tissue contracture

Possible surgical complications
- Infection
- Humeral shaft fracture
- Neurovascular compromise
- Recurrence of stiffness

Expected long-term outcome may take 6-12 months to achieve.
- Patient reports a relatively pain-free shoulder, which facilitates return to usual functional activities. Some patients will not regain full range into combined internal rotation (hand behind back) position.

Arthroscopic subacromial decompression (ASAD)

Indications
- Pain arising from impingement of structures within subacromial space considered to be amenable to surgical intervention

Possible surgical complications
- Infection
- Neurovascular compromise
- Persistent pain despite decompression

Expected long-term outcome
- Patient reports a relatively pain-free shoulder which facilitates return to usual functional activities. Some patients continue to experience mild discomfort with repetitive or heavy tasks overhead. These may need to be modified. Some patients will not regain full range into combined rotation (hand behind back) position

It may take 9 - 12 months for patients to realise their potential following the above procedures.
Milestone driven

These guidelines are milestone driven and designed to provide an equitable rehabilitation service to all of our patients. They will also limit unnecessary visits to the outpatient clinic at the RNOH by helping the patient and therapist to identify when specialist review is required.

If the patient and the therapist feel that rehabilitation is progressing satisfactorily and there are no concerns the patient may cancel and re-book their follow up for a later date.

Failure to progress or variations from the norm should be the main reason for clinic attendance. Both patients and therapists can book clinic visits by contacting the numbers given in this document.

It is essential you contact us if you have any concerns.

Useful Contacts

Physiotherapy Team  020 8909 5820/5519
Occupational Therapy Team  020 8909 5310
Consultant Team Secretary  020 8909 5456/5727
Rehabilitation Guidelines for a Post-Operative Stiff Shoulder

Post Op Care Plan

The RNOH Shoulder Physiotherapy Service follows this care plan prior to discharge.

**Procedures:** Capsular Release/Manipulation under Anesthetic (MUA)) Subacromial Decompression (SAD/ASAD)

**Goals:**

1. To educate the patient on post operative instructions and expected outcomes following surgical procedure.

2. To demonstrate application/removal of sling/brace as well as education on resting positions within post-operative restrictions.

3. To assess shoulder post operative ROM and to provide exercises/stretches within the post – op guidelines/restrictions. Teach scapular setting and hand/wrist/elbow ROM exercises (where appropriate).

4. To teach and ensure that the patient and/or carers are competent with the post operative exercise programme and can maintain the program post discharge.

5. To ensure all patients requiring further physiotherapy are given a copy of their outpatient referral prior to discharge and are aware that they can contact the Shoulder Service if local services fail to provide a timely appointment.

**NOTE:**

A. Patients who are having difficulty or are considered to be at high risk of losing ROM (Pain/Psychological state/Pre-op condition/existing pathology) should be considered for a delayed discharge and an URGENT referral to local outpatient and/or community services (if appropriate) must be provided.

B. Capsular release patients should achieve 90% of sedated ROM prior to discharge from hospital. Some patients may also require a roller towel regime to be continued post discharge.
Initial Rehabilitation Phase One discharge - 6 weeks

Goals:
1. Ensure Wound/Tissue Healing
2. Encourage effective pain control
3. Maintain/Increase Passive/Active Assisted ROM as documented on patient specific referral.
   (Note: Patients who have had a MUA/capsular release should achieve 90% of sedated shoulder ROM prior to discharge from hospital)
4. Initiate early isometric cuff and scapular control
5. Wean out of Sling as documented on patient specific referral (normally 1-3 weeks maximum)

Restrictions:
1. No hand behind back
2. No unsupported active elevation above shoulder height
3. Exercise should remain relatively pain-free

Education: Patient education on anatomy of shoulder complex, post-op restrictions, progression of short/long term goals in conjunction with guidelines, postural advice/retraining, advise on functional activities (light waist-level, driving when comfortable, and return to work within early guidelines).

Treatment options:
- Ice and resting positions
- Stick exercises for passive and active assisted stretches
- Waist level isometric cuff control (patient must be in a supported position)
- Scapular setting and postural control
- Capsular stretches and manual joint mobilizations (mainly after 2 weeks)
- MUA/Capsular release patients may be required to use a roller towel regime at home to maintain ROM (will be arranged pre-discharge if appropriate)
- Encourage hand/wrist/elbow ROM ex’s to avoid secondary stiffness
Milestones to progress to Phase Two:

1. Adequate pain control
2. Adequate scapula control
3a. ASAD - 90° passive flexion in neutral rotation
   b. MUA/ACR – achieving at least 90% of PROM documented at inpatient discharge
4. Achieved time specific individual goals if specified on individual referral.

Failure to meet milestones:

1. Refer to ‘Failure to progress’ table
2. Delay progression to next phase of rehabilitation
3. Refer to/discuss with Shoulder and Elbow Unit

Late Rehabilitation Phase Three: Weeks 6-24+

Goals:
1. To restore full active range of movement (patient specific).
2. To progress cuff control through range to the exclusion of deltoid and without inappropriate muscle patterning (Pecs, Lat, Traps, etc).
3. To develop power and endurance of appropriate muscle groups (patient specific) and relate to functional tasks.
4. Ensure appropriate scapulo/humeral rhythm.

Restrictions:
1. Where possible minimize exercises that may exacerbate pain.
2. Ensure the rotator cuff is functioning well at a low level and the humeral head is "snuggling" into the glenoid (i.e. subtle caudad movement is seen of humeral head on initiation of isometric abduction) and the patient is no longer hitching the shoulder before progressing to active exercises above shoulder level.

Education: Patient education around pacing of activity, exercise caution with previously aggravating activities, ongoing postural education, Normal movement with functional activities and realistic expectations.

Treatment options:

Build up rotator cuff control through range to the exclusion of deltoid, then with deltoid supported and then finally with deltoid unsupported.
Use a closed and open chain exercise programme.
Capsular stretches as required for anterior and posterior capsule.

**Failure to Progress:** If a patient is failing to progress, then consider the following:

<table>
<thead>
<tr>
<th>Possible Problem</th>
<th>Action</th>
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<tbody>
<tr>
<td>Pain Inhibition</td>
<td>Adequate analgesia</td>
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<tr>
<td></td>
<td>Maintain pain free exercises</td>
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<td></td>
<td>Return to passive stretches</td>
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<td></td>
<td>Slow rehab programme</td>
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<td></td>
<td>If severe night/resting pain then refer to Shoulder Unit</td>
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<tr>
<td>Poor Rotator Cuff Control</td>
<td>Ensure passive range is gained</td>
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<td></td>
<td>Isometrics through range</td>
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<td>Rotation dissociation through range with decreasing levels of support</td>
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<td></td>
<td>and increasing resistance</td>
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<td></td>
<td>Slow progression through theraband resistances (e.g.</td>
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<td></td>
<td>Yellow/white tend to bias cuff and green tend to incorporate deltoid)</td>
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<tr>
<td>Poor Scapular Control</td>
<td>Work on scapular setting through range without pec</td>
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<td></td>
<td>and/or lat overactivity</td>
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<td>Consider prone lying to develop control/awareness</td>
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<td>Poor Core Stability</td>
<td>Develop patient appropriate stability programme.</td>
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<td>Secondary ‘frozen’ shoulder</td>
<td>Maintain passive ROM as able</td>
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<td></td>
<td>Use manual mobilizations</td>
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<tr>
<td>Unable to gain strength</td>
<td>May need to increase ROM first</td>
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<td>Patient exercising too vigorously</td>
<td>Education on pacing, risks of flare-up scenario</td>
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<tr>
<td>Poor patient compliance with HEP</td>
<td>Set functional based goals</td>
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<td>Return to ADL to soon</td>
<td>Reduce activity levels</td>
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<tr>
<td>Cervical/thoracic referred pain</td>
<td>Assess and treat</td>
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<tr>
<td>Altered neurodynamics</td>
<td>Assess and treat</td>
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</tbody>
</table>
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Occupational Therapy Team – 020 8909 5310

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Many thanks for your help

The Shoulder and Upper Limb Unit

References:


- Very useful resource for sample exercises especially glenohumeral rotation control and closed kinetic chain. Contact Biomet-Merck for copies.
