**Post-Operative Therapy following Anatomical Total Shoulder Replacement**

This is a guideline of rehabilitation for physiotherapists; **any limitations and restrictions recorded in the patients’ operation note should take precedence. These guidelines should be used in conjunction with your assessment of the patient. Your treatment should be clinically reasoned and adapted to the individual patient’s needs. Time frames are approximate; progress as clinically indicated, only moving onto the next phase once the patient can comfortably achieve phase appropriate exercises and tasks, unless the operation note specifies otherwise. The exercises offer ideas rather than being a prescription.**

Summary: a TSR involves replacement of the glenoid and humeral components of the GHJ; these are NOT for reverse polarity, DJO or Bayley –Walker. Please note that the procedure involves a delto-pectoral approach with the shoulder being dislocated anteriorly and the subscapularis muscle being incised and repaired.

<table>
<thead>
<tr>
<th>0-6 weeks</th>
<th>Approx. 6-12 weeks</th>
<th>Approx. 12 weeks plus</th>
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<tbody>
<tr>
<td><strong>PHASE 1: PROTECTION</strong></td>
<td><strong>PHASE 2: MUSCLE ACTIVATION</strong></td>
<td><strong>PHASE: PROGRESS LOADING &amp; NORMAL MVT</strong></td>
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**Advice**
- Sling 6/52, can be removed for exercises and washing/ dressing with the use of Collar and Cuff.
- No arm behind back for 6/52
- For 6/52 do not let arm fall back to rest beyond midline of body. Use pillow.
- **No resisted IR to protect Subscapularis (SBSC) repair**
- Encourage good posture.
- **Do not force into pain.**
- Keep lower body active as appropriate. E.g. walking, recumbent bike, squats.

**Exercises (SHOULD NOT EXACERBATE PAIN)**
- Neck mvts.
- Scapula rolls/shrugs.
- Elbow/forearm/wrist/finger movements (if biceps tenodesis no active flexion, extension only to 30)
- AAROM GHJ Flexion 0- 90 (eg, lying, sitting)
- AAROM GHJ ER to neutral.
- Isometric external rotation, extension, flexion, abduction (not IR).

**Advice**
- Wean sling – starting in the home. Could try 1 hour on/off. Build as comfort allows.
- Light use only at waist/chest height – i.e. mug water, plate, buttering bread, brushing teeth, washing face, writing for short periods. Pace activities.
- Encourage good posture with an emphasis on normal movement.
- **Do not force movement or into pain.**

**Exercises (SHOULD NOT EXACERBATE PAIN)**
- **Cuff work:** Can progress through supported cuff control in varying degrees of abduction as able.
  - **Ensure adequate control prior to progression of loading**
  - **AAROM:** Can progress as comfort allows. E.g ball roll on table, forward lean reach, hand up wall, correct scapula control during movement.
  - **Functional AROM:** Can progress range naturally, as comfort allows, if has good cuff activation and normal mvt.
  - **Prime movers:** Once cuff control is improving start to consider the other prime movers of the shoulder (including a deltoid regime if needed).

**Advice**
- Progress activities above chest height as pain allows and without compensatory movements.
- Begin gradual weight bearing. May be able to start re-using walking aid and driving as comfort allows (see patient advice).
- Avoid heavy lifting for 6 months.
- Avoid contact activities: to be discussed with consultant.

**Exercises (SHOULD NOT EXACERBATE PAIN)**
- **Cuff Work:** Progress to unsupported if able.
  - Can begin with elbow supported against a wall → progress to unsupported through range.
- **Functional AROM:** progress as able. Monitor scapula-humeral rhythm and address as needed. If tight consider PROM.
- **Prime movers:** progress through range with weights. Manufacturers suggest up to 9kg/20lbs of weight can be lifted. Use your discretion based on the muscular control of the individual.
- **Gentle graded weight bearing exercises** e.g. table/wall lean/push up plus.
### Possible Complications:

<table>
<thead>
<tr>
<th>Possible Complications</th>
<th>Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prosthesis failure/loosening</td>
<td>Pain, sudden loss of range and power.</td>
<td>Contact RNOH surgical team +/- GP → Likely X-ray</td>
</tr>
<tr>
<td>Infection</td>
<td>Pain, fever, redness, wound oozing, rash, itching, general feeling of malaise.</td>
<td>Contact RNOH surgical team +/- GP.</td>
</tr>
<tr>
<td>Humeral shaft fracture</td>
<td>Acute pain possibly following trauma. Loss range and power.</td>
<td>Contact RNOH surgical team +/- local A&amp;E → Likely X-ray</td>
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<tr>
<td>Dislocation</td>
<td>Altered appearance (possible visible sulcus or abnormality), possible altered NVS.</td>
<td>Contact RNOH surgical team +/- local A&amp;E → Likely X-ray</td>
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<tr>
<td>Neurovascular compromise</td>
<td>Altered sensation, loss of power, colour changes in limb.</td>
<td>Neurovascular tests → if loss of pulse send to A&amp;E.</td>
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<td></td>
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<td>→ if newly reduced sensation/power → Contact RNOH surgical team</td>
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<tr>
<td>Failure to progress;</td>
<td>Lacking ROM, decreased muscle activation (consider cuff integrity), pain.</td>
<td>Modify exercises to limit compensatory movements.</td>
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<tr>
<td>-RC failure due to pre-existing cuff disease</td>
<td>-Humeral head not remaining centralised during movement (not “snuggling”).</td>
<td>-Consider RC exercises in supported positions.</td>
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<tr>
<td>-Inability of deltoid to power the shoulder</td>
<td>-Atrophy of deltoid. Shoulder hitching/reverse SH rhythm.</td>
<td>Contact RNOH therapy team to discuss.</td>
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<tr>
<td></td>
<td></td>
<td>-Graded exercises for deltoid.</td>
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<td></td>
<td></td>
<td>Contact RNOH therapy team to discuss.</td>
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</table>

### Desired Outcome: (may take up to 12-24 months)

- Stable, mostly pain-free shoulder.
- Able to carry out activities between waist and chest heights.
- Able to carry out light to medium activities (discuss with surgeon for high level specific tasks as individuals may differ).

### Telephone numbers:

<table>
<thead>
<tr>
<th>Telephone numbers</th>
<th>Therapy Team (Physio and OT) 0208 909 5820</th>
<th>Clinical Nurse Specialist (Amanda) 0208 385 3024</th>
<th>General number for Secretaries 0208 909 5107</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretaries to surgical team</td>
<td>Mr Falworth 0208 385 3025 Miss Higgs 0208 909 5457</td>
<td>Mr Majed 0208 909 5565 Mr Rudge 0208 909 5671</td>
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### In collaboration with:
RNOH Shoulder and Elbow Team

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