

Plymouth Reverse Geometry TSR Rehabilitation Protocol

Phase	1. Protection & Education
Time Frame	0 to 6 weeks post procedure
Key Goals	<ul style="list-style-type: none"> • Protect the prosthesis • Education of patient regarding post-operative precautions and importance of adherence to and compliance with rehabilitation programme • Achieve AAROM up to 90° flexion and 90° elevation in scaption and 30° ER • Reduce pain • Prevent compensatory/ poor movement patterns • Reactivate deltoid
Avoid	<ul style="list-style-type: none"> • Combined abduction and external rotation • WB through operated arm when getting out of bed or chair and when using walking aids • Lifting with the operated arm • Extension • HBB/ IR • Forcing any movement • Increasing pain
Interventions	<ul style="list-style-type: none"> • Educate patient in relation to timescales, precautions and sling management • Introduce AROM elbow, wrist, hand exercises from day 1 • Introduce Shoulder Active Assisted Range of Movement (AAROM) Exercises After check X-ray cleared and once nerve block has worn off start AAROM Flexion up to 90°, elevation in scaption up to 90°, ER to 30° • Introduce deltoid activation exercises from 3 weeks, submaximal pain free isometrics in scaption • Introduce supine static joint holds at 90° shoulder flexion and begin active elbow flexion/extension in this position (3 weeks+) • Ensure good scapular/GHJ dissociation • Correct any abnormal movement patterns
Notes	<p>SLING: Sling to be worn for comfort, usually 2-3 weeks until post-operative pain starts to settle. If surgery performed for fracture or there is poor deltoid function sling may be worn for up to 6 weeks. Make sure patient is aware of restrictions to ROM described above during this time.</p> <p>SLEEP POSITION: Patient to sleep supine with operated arm on a pillow in some abduction and flexion for 6 weeks</p> <p>NERVE BLOCK: ensure nerve block has worn off before starting AAROM shoulder exercises</p> <p>CRYOTHERAPY: Consider use of cryotherapy as necessary if tolerated</p>

Phase	2. Control through Range & Strengthening
Time Frame	From 6 weeks post procedure
Criteria to commence stage	<ul style="list-style-type: none"> • Pain controlled • No signs of instability • Deltoid function • No abnormal movement patterns • Able to do AAROM shoulder exercises • NB: If patients fail to meet criteria for phase 2 then they should continue with phase 1 exercises
Key Goals	<ul style="list-style-type: none"> • Restore active shoulder ROM (full ROM not expected) • Progress AAROM (full AAROM not expected) • Optimise dynamic control through range • Prevent poor movement patterns
Avoid	<ul style="list-style-type: none"> • Heavy lifting • WB through the operated arm • Combined abduction/external rotation
Interventions	<ul style="list-style-type: none"> • Continue AAROM exercises, and progress ROM • Commence Active Range of Movement (AROM) exercises: these must be pain free with appropriate shoulder girdle mechanics • ER ROM can be increased • Educate patient and promote appropriate shoulder girdle mechanics with AAROM/AROM exercises • Progress deltoid rehab exercises, starting with supine arcs unloaded. Progress from supine to sitting/upright as able. Emphasis on movement quality and control. Limit repetition to point of fatigue or loss of control. • If patient has control of flexion can begin HBB & extension ROM
Notes	<ul style="list-style-type: none"> • SLING: discontinue use of sling if not done so already

Phase	3. Strengthening Progression & Function
Time Frame	From 12 weeks post procedure
Criteria to commence stage	<ul style="list-style-type: none"> • Pain controlled functional AROM • Deltoid function through range • Good shoulder mechanics/ movement quality • No signs of instability
Key Goals	<ul style="list-style-type: none"> • Regain functional AROM (final range will vary but full ROM not expected) • Regain function specific strength and endurance • Return to ADL's/ hobbies that do not require heavy lifting or repetitive overhead activity. • Ensure continued good shoulder mechanics/ movement patterns
Avoid	<ul style="list-style-type: none"> • Heavy lifting • Sudden lifting or pushing activities • Non-essential WB through the operated arm
Interventions	<ul style="list-style-type: none"> • Progress deltoid rehab, to include loaded progression • Progress to resisted flexion or flexion in scapular plane in standing • Consider IR and ER exercises against resistance • Include kinetic chain exercises if appropriate • Functional movement re-education specific to patients demands • Increase stamina and endurance • Educate patient with regards long term management strategies
Notes	<ul style="list-style-type: none"> • Patient may consider return to ADL's and hobbies that do not require heavy lifting or repetitive overhead activity

A. CONSIDERATIONS:

Treatment Progression	<ul style="list-style-type: none"> • Rate of progression and outcome can depend on a number of factors including patient age, their pre-op status, deltoid function and whether surgery was performed for trauma • If surgery performed as fracture management consideration needs to be given to fracture healing and integrity of tuberosity reconstruction
Acromial fracture	<ul style="list-style-type: none"> • If patients develop an acromial stress fracture discontinue AROM elevation and deltoid rehab for 4-6 weeks or until pain settles • Maintain AAROM during this time