

## Edmonton Region Shoulder Rehabilitation Guidelines - Total Shoulder Arthroplasty

**Surgery Date:** \_\_\_\_\_ **Surgeon:** \_\_\_\_\_ **Patient Information:** \_\_\_\_\_

**Procedure:** \_\_\_\_\_

**ROM Limitations: External Rotation: 0 Degrees** \_\_\_\_\_ **15 Degrees** \_\_\_\_\_ **30 Degrees** \_\_\_\_\_

**Other:** \_\_\_\_\_

**Additional Information:** \_\_\_\_\_

### PHASE I – Immediate (0 – 7 days)

GOALS OF PHASE	SPECIFIC TREATMENT INTERVENTION	CRITERIA FOR PROGRESSION TO PHASE II
<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>• Education re: surgical outcomes / post-operative expectations</li> <li>• Optimize / Protect healing tissue (especially subscapularis)</li> <li>• Maintain integrity of replaced joint</li> <li>• Decrease Pain and Inflammation</li> <li>• <i>Protected</i> GH joint ROM</li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>• Address Kinetic Chain (adjacent joints, posture, etc.)</li> <li>• General Health / Wellness</li> </ul> <p><b>Cautions:</b></p> <ul style="list-style-type: none"> <li>• <b>No external rotation (or other) ROM beyond limits set above</b></li> <li>• <b>No active internal rotation ROM &amp;/or strengthening</b></li> <li>• <b>No active abduction and external rotation</b></li> <li>• <b>No excessive stretching</b></li> <li>• <b>No lifting, pushing and/or pulling with affected arm</b></li> </ul>	<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>• Review post-operative guidelines &amp; expected surgical outcomes</li> <li>• Immobilization in sling/swath as dictated by surgeon/PT</li> <li>• Out of sling for washing / PT exercises /<u>simple</u> ADL (brushing teeth, eating, writing) <b>if painfree</b></li> <li>• Ice/EPAAs needed for pain relief</li> <li>• Advice on sleep/rest/ positions</li> </ul> <p><b><i>Dosage for all exercises are <u>dictated by pain and patient being able to perform without compensation</u></i></b></p> <ul style="list-style-type: none"> <li>• <u>Gentle</u> PROM into forward flexion, scaption and external rotation to limits set above</li> <li>• AAROM → AROM forward elevation in supine (using contralateral limb or stick) or with pulleys</li> <li>• AAROM → external rotation (shld adducted) to established limit above in supine or sitting (using contralateral limb or stick)</li> <li>• Standing pendular ROM exercise               <ul style="list-style-type: none"> <li>○ unweighted; ROM to dinner plate circumference only</li> <li>○ supported with hand on physio ball</li> </ul> </li> <li>• Scapular setting exercises in sitting (retraction/retraction &amp; depression)               <ul style="list-style-type: none"> <li>○ Shoulder in sling or supported at side</li> </ul> </li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>• Wrist / hand / elbow ROM with shoulder in sling or supported at side</li> <li>• C-spine/T-spine ROM exercises (as directed by PT)</li> <li>• Posture exercises (as directed by PT)</li> </ul> <p>• CV exercises with shoulder in sling (recumbent stationary bike, walking)</p>	<ul style="list-style-type: none"> <li>• Tissue healing i.e. no sign of abnormal / disruption to repair / adherence to external rotation ROM precautions</li> <li>• Pain reduced at rest</li> <li>• Patient able to properly set scapula with arms at side</li> <li>• Patient able to perform AAROM exercises prescribed with minimal pain</li> <li>• Independence in performing exercises</li> </ul>

## Phase II – Early (Week 1 – 6)

GOALS OF PHASE	SPECIFIC TREATMENT INTERVENTION	CRITERIA FOR PROGRESSION TO PHASE II
<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>• Optimize / Protect healing tissue (especially subscapularis)</li> <li>• Maintain integrity of replaced joint</li> <li>• Increase GH Joint ROM and strength (AAROM→AROM)</li> <li>• Decrease Pain and Inflammation</li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>• Address Kinetic Chain (adjacent joints, posture, etc.)</li> <li>• General Health / Wellness</li> </ul> <p><b>Cautions:</b></p> <ul style="list-style-type: none"> <li>• <b>No external rotation (or other) ROM beyond limits set above</b></li> <li>• <b>No active internal rotation ROM &amp;/or strengthening</b></li> <li>• <b>No active abduction and external rotation</b></li> <li>• <b>No excessive stretching</b></li> <li>• <b>No lifting, pushing and/or pulling with affected arm</b></li> </ul>	<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>• Immobilization in sling/swath as dictated by surgeon/PT</li> <li>• Out of sling several times/day for washing / PT exercises / ADL activities</li> </ul> <p><i><b>Dosage for all exercises are <u>dictated by pain</u> and patient being able to perform <u>without compensation</u></b></i></p> <ul style="list-style-type: none"> <li>• <u>Gentle PROM</u> into forward flexion, scaption and external rotation to limits set above</li> <li>• AAROM → AROM forward elevation / scaption in supine &amp; standing (stick, pulleys, wall walking, ball on wall)</li> <li>• AAROM → AROM external rotation (shld adducted) to established limit in supine or sitting (using contralateral limb or stick)</li> <li>• Standing pendular ROM exercises               <ul style="list-style-type: none"> <li>○ unweighted &amp; supported with hand on physio ball</li> </ul> </li> <li>• Scapular setting exercises in sitting (retraction/retraction &amp; depression)               <ul style="list-style-type: none"> <li>○ May progress to sitting on physio ball or standing</li> <li>○ May add in small distal arm motions with scapular setting (e.g. ball on bed)</li> </ul> </li> <li>• Isometric exercises with shld in adducted position               <ul style="list-style-type: none"> <li>○ Flexion/abduction/extension/external rotation (<b>NO internal rotation</b>)</li> </ul> </li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>• Wrist / hand / elbow ROM and hand gripping exercises</li> <li>• C-spine/T-spine ROM exercises (as directed by PT)</li> <li>• Posture exercises (as directed by PT)</li> <li>• CV exercises with shoulder in sling (recumbent stationary bike, walking)</li> </ul>	<ul style="list-style-type: none"> <li>• Tissue healing i.e. no sign of abnormal / disruption to repair / adherence to external rotation ROM precautions</li> <li>• Patient able to <u>actively</u> elevate shoulder to a minimum of 90° flexion or scaption and ER to neutral</li> <li>• Patient able to perform prescribed dosage of exercises with good technique/control and without reproducing pain and/or symptoms</li> <li>• Improved strength of shoulder girdle musculature from initial assessment (outcome measure: resisted isometric testing)</li> <li>• Patient reports overall increase in use of affected arm in ADL activities and overall decrease of pain (associated mostly with use)</li> </ul>

### PHASE III – Intermediate (Week 7 – 12)

GOALS OF PHASE	SPECIFIC TREATMENT INTERVENTION	CRITERIA FOR PROGRESSION TO PHASE III
<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>• Increase shoulder girdle strength and endurance</li> <li>• Increase GH joint ROM (AROM → AROM w/ light resistance)</li> <li>• Protect healing tissue and maintain integrity of replaced joint</li> <li>• Minimize shoulder pain</li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>• Increase functional activities (ADL)</li> <li>• Increased integration of kinetic chain (adjacent joints, posture, etc.)</li> <li>• General Health / Wellness</li> </ul> <p><b>Cautions:</b></p> <ul style="list-style-type: none"> <li>• <b>No excessive stretching</b></li> <li>• <b>Gentle AROM into IR and ER (within pain limits only)</b></li> <li>• <b>No active abduction and external rotation</b></li> <li>• <b>No lifting, pushing and/or pulling with affected arm</b></li> </ul>	<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>• Pendular ROM exercises (unweighted; increase ROM as pain allows)               <ul style="list-style-type: none"> <li>○ Add scapular retraction / protraction</li> </ul> </li> </ul> <p><b><i>Patient can progress to all shoulder active ROM (including abduction, IR and ER) when able to move through range <u>without pain and without compensation</u></i></b></p> <ul style="list-style-type: none"> <li>• AAROM → AROM exercises → AROM with light resistance (1-2 lbs or light tubing)</li> <li>• Functional / U/E Kinetic Chain Exercises (wall washing, ball on the bed or wall, functional movement patterns, PNF patterns)</li> <li>• Scapular stabilization exercises (retraction / retraction &amp; depression AND protraction)               <ul style="list-style-type: none"> <li>○ Progress from arms at side → waist → shld height, short arc/short lever dynamic movements (rowing, ball on bed ex.)</li> </ul> </li> <li>• Closed Kinetic Chain (CKC) exercises               <ul style="list-style-type: none"> <li>○ Weight-bearing onto large physio ball/table, quadruped position, serratus punch-up ex., wall push-ups *all done with proper scapular positioning</li> </ul> </li> </ul> <p>Shoulder Girdle Strengthening (emphasis on scapular stabilizers, deltoid &amp; ER)  <b>NO internal rotation strengthening</b></p> <ul style="list-style-type: none"> <li>• Progress from isometrics → isometrics in varied positions → isotonic</li> <li>• Begin with flexion, scaption planes of movement → progress to abduction with low load and short lever arm only</li> <li>• Begin with shoulder in neutral at side then gradually progress to performing exercises at waist level</li> <li>• Progress to combined, functional movement patterns vs. isolated movements</li> <li>• Dosage should reflect strength &amp; endurance goals</li> <li>• <b>Avoid long lever positions for all strength exercises</b></li> <li>• Ice and EPAs as needed for pain relief</li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>• Continue wrist / hand / elbow / spine ROM and posture exercises as required (especially C-spine side flexion &amp; T-spine extension and rotation ROM)</li> <li>• Elbow/biceps curls with light weight (arm at side)</li> <li>• Progress CV exercises (directed by PT)</li> <li>• Educate/advise on appropriate and safe return to ADL/sport activities</li> </ul>	<ul style="list-style-type: none"> <li>• Patient able to <u>actively</u> elevate shoulder to a minimum of 90° flexion or scaption and ER to neutral</li> <li>• Patient able to perform prescribed dosage of exercises with good technique/control and without reproducing pain and/or symptoms</li> <li>• Improved strength and endurance of shoulder girdle musculature from initial assessment (outcome measure: resisted isometric testing)</li> <li>• Patient reports overall increase in use of affected arm in ADL activities and overall decrease of pain (associated mostly with use)</li> </ul>

## PHASE IV – Return to Activity (12 – 24+ Weeks)

GOALS OF PHASE	SPECIFIC TREATMENT INTERVENTION	CRITERIA FOR RTA / HOME PROGRAM
<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>• Functional ROM of GH joint and entire U/E kinetic chain</li> <li>• Improved shoulder girdle neuromuscular strength, endurance &amp; proprioception</li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>• Full return to all ADLs, work and recreational activities allowed with joint replacement</li> <li>• Protect healing tissue and maintain integrity of replaced joint</li> </ul> <p><b>Cautions:</b></p> <ul style="list-style-type: none"> <li>• <b>No excessive stretching</b></li> <li>• <b>Gentle strengthening into internal rotation</b></li> <li>• <b>No heavy lifting, pushing and/or pulling with affected arm</b></li> </ul>	<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>• Range of Motion / Stretching               <ul style="list-style-type: none"> <li>• Continue AROM – focus on combined, functional ROM exercises</li> <li>• Gentle PT assisted PROM/stretching as required</li> </ul> </li> <li>• Shoulder Girdle Strengthening (emphasis on scapular stabilizers, deltoid &amp; rotator cuff)               <ul style="list-style-type: none"> <li>• <b>Gentle internal rotation strengthening allowed</b></li> <li>• Begin IR strengthening with isometrics → isometrics in varied positions → isotonic</li> <li>• Continue flexion, scaption &amp; abduction exercises → progress load and dosage</li> <li>• Progress to performing exercises at waist level, shoulder level, etc.</li> <li>• Progress to combined, functional movement patterns vs. isolated movements</li> <li>• Dosage should reflect strength &amp; endurance goals</li> <li>• <b>Avoid long lever positions for all strength exercises</b></li> </ul> </li> </ul> <p><i>All exercise progressions based on patient being able to perform prescribed dosage with good technique (ie. scapular control) AND without reproducing pain and/or other symptoms</i></p> <ul style="list-style-type: none"> <li>• Functional/U/E Kinetic Chain Exercises               <ul style="list-style-type: none"> <li>○ Progress from Phase III - dosage, ROM, functional positions, speed, reaction time, L/E challenge</li> </ul> </li> <li>• Closed Kinetic Chain exercises (as in Phase III)               <ul style="list-style-type: none"> <li>• Progress by slowly increasing weight bearing through U/E, adding perturbations, endurance, functional positions, etc.</li> </ul> </li> </ul> <p><i>All kinetic chain exercises should be performed Painfree with Proximal Stability (proper spine posture and stable scapula) and progressed only if patient can maintain this position while performing the exercise</i></p> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>• Activity-specific exercises to address functional goals for returning to allowed ADL/work/recreational activities</li> <li>• Advise on limitations of joint replacement procedure (i.e. contraindicated activities/sports)</li> </ul>	<ul style="list-style-type: none"> <li>• Functional GH joint AROM <b>AROM should be painfree and performed with proper scapulohumeral rhythm</b></li> <li>• Improved strength and endurance of shoulder girdle musculature (compared to beginning of Phase IV)</li> <li>• Patient able to demonstrate proper scapular control with dynamic testing (ie. GH joint ROM and/or functional movement pattern)</li> <li>• Patient able to use affected arm in most to all ADL activities</li> <li>• Return to work/sport as directed by surgeon &amp; PT</li> </ul>

**For more information on these guidelines please go to:**

**<http://rehabilitation.ualberta.ca/research/research-groups/shoulder-and-upper-extremity-research-group-of-edmonton/shoulder-rehabilitation-guidelines>**





