

## Edmonton Region Non-operative Rotator Cuff Related Shoulder Rehabilitation Guidelines

*\*The following 4 treatment principles should be considered and integrated into the management of all patients with rotator cuff (RC) related pathology. Patient outcomes and specific treatment interventions will vary dependent upon the type and severity of RC pathology as well as the specific clinical findings and goals of the patient. Active PT should continue for at least 3 months but may take up to 6 months. Once patients can perform exercises independently, they should do so at home at least 4 days/wk. with periodic follow-up to assess changes and progress the program.*

1. Manage pain – Largely educational related to “do’s and don’ts” such as avoiding activities/positions in which the arm is behind the plane of the body, long lever activities/positions especially with load and prolonged, repetitive overhead activities/positions. Adjunctive treatments of heat/ice may be helpful and taught for home use. Medical management (i.e. NSAIDs, injections) may be considered, after 6 weeks of active physical therapy, if pain is not diminished.
2. Improve/maintain shoulder joint mobility – All treatments should include joint/soft tissue mobility exercises to improve or maintain shoulder motion and prevent adhesive capsulitis. Optimal, functional glenohumeral (GH) joint range of motion (ROM) with proper scapulohumeral (SH) rhythm is the primary goal. Treatments/exercises should be performed within the limits of pain when possible.
3. Establish a strong, stable base of support for the shoulder girdle – Lower extremity/pelvis/spine mobility and strength should be established, and optimal posture/stability incorporated into all shoulder girdle exercises. Shoulder rehabilitation should always include exercises for the scapular stabilizing muscles; specifically, trapezius and serratus anterior.
4. Optimize rotator cuff (RC) strength – All treatments should include strength exercises for the RC. Exercises should be performed with proper spine posture and a strong scapulothoracic joint. Strength goals should include proper balance (i.e. recruitment, timing) and endurance and should be performed isometrically, concentrically and eccentrically at increasingly more functional ranges of motion.

## PHASE I (Week 1 - 2): Pain Management, Patient Education & Foundational Exercises

GOALS OF PHASE	SPECIFIC TREATMENT INTERVENTION	CRITERIA FOR PROGRESSION TO PHASE II
<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>● Reduce / Manage Pain</li> <li>● ↑ Shoulder Girdle ROM</li> <li>● Initiate RC &amp; scapulothoracic exercises</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>Avoid painful exercises/activities in impingement positions</b></li> </ul>	<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>● Education re: shoulder pathology and rehabilitation treatment plan</li> <li>● Ice/heat as needed for home pain relief</li> <li>● Advice on sleep positions, avoidance of pain-provoking positions, etc.</li> </ul> <p><i>Dosage for all exercises are dictated by pain and patient being able to perform with proper posture and trunk control AND <u>without compensation</u> (i.e. shoulder hiking)</i></p> <ul style="list-style-type: none"> <li>● Standing pendular ROM exercise (unloaded)</li> <li>● Physio ball compression with ROM (standing, can add scapular retraction if able)</li> <li>● AAROM with stick/contralateral arm (flexion, abduction, diagonal patterns, ER &amp; IR in adduction)</li> <li>● PT assisted stretching / joint mobilization techniques as needed (within pain limits) <ul style="list-style-type: none"> <li>○ Pectoralis minor, posterior shoulder stretches</li> </ul> </li> <li>● RC exercises as able (based on assessment) <ul style="list-style-type: none"> <li>○ Isometric □ isotonic/minimal resistance/low arc/neutral position</li> </ul> </li> <li>● Scapular setting exercises in sitting (elevation/retraction/depression/protraction) <ul style="list-style-type: none"> <li>○ May progress to sitting on physio ball or standing</li> <li>○ May add light resistance band if able</li> </ul> </li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>● C-spine/T-spine ROM exercises /joint mobilizations (as directed by PT)</li> <li>● Hip ROM/flexibility exercises (as directed by PT)</li> <li>● Posture/core stability exercises (as directed by PT)</li> <li>● CV exercises</li> </ul>	<ul style="list-style-type: none"> <li>● Pain reduced at rest and with ADL as compared to baseline measures</li> <li>● Improved GH joint ROM as compared to baseline measures AND reduced pain reported with exercises</li> <li>● Patient able to properly set scapula with arms at side</li> <li>● Identified kinetic chain deficits improved</li> </ul>

## PHASE II (Week 2 – 6): Mobility & Stability

GOALS OF PHASE	SPECIFIC TREATMENT INTERVENTION	CRITERIA FOR PROGRESSION TO PHASE III
<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>● ↑ Shoulder Girdle ROM (Active-Assist □ Active)</li> <li>● ↑ Scapulothoracic strength</li> <li>● ↑ RC strength</li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>● Increased integration of kinetic chain (adjacent joints, posture, etc.)</li> <li>● Increase functional activities (ADL)</li> <li>● Monitor pain management</li> <li>● General Health / Wellness</li> </ul> <p><b>Cautions:</b></p> <ul style="list-style-type: none"> <li>● <b>Avoid exercises/activities in impingement positions</b></li> </ul>	<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>● Progress GH joint <b>ROM exercises:</b> <ul style="list-style-type: none"> <li>● AAROM □ AROM exercises □ progressive, overhead + abducted positions</li> <li>● AROM □ AROM with resistance (gravity resisted, light weight or theraband, ball on the wall)</li> <li>● PT assisted stretching/joint mobilization techniques as needed (pec minor/posterior shoulder stretches)</li> </ul> </li> </ul> <p><b><i>Emphasize proper SH rhythm when moving through AROM (i.e. no shoulder hiking)</i></b></p> <ul style="list-style-type: none"> <li>● Progress <b>scapulothoracic exercises</b> (elevation/retraction/depression/protraction) <ul style="list-style-type: none"> <li>● Progress to arms at side, short arc/short lever dynamic movements with resistance (rowing, ball on bed ex.)</li> <li>● Serratus anterior supine punch ex., wall push-up plus □ push-up plus from knees</li> </ul> </li> <li>● Closed Kinetic Chain exercises (E.g. weight-bearing onto large physio ball/table, quadruped position, modified plank positions – all with proper scapular positioning)</li> <li>● Isometric □ Isotonic <b>RC strength exercises:</b> <ul style="list-style-type: none"> <li>● Isometrics performed in neutral position □ isometrics performed in varying degrees of GHJ rotation, abduction and flexion</li> <li>● Isotonics below shoulder height (tubing, pulleys, light [&lt;5 lbs.] weights)</li> <li>● Progress towards shoulder height if patient can control scapula and perform without compensation (i.e. shoulder hiking)</li> <li>● Cautious with long lever exercises</li> <li>● Focus on GHJ - IR, ER, Flex, Ext, Abd, Add / Elbow – Flex, Ext, Sup, Pron</li> </ul> </li> </ul> <p><b><i>All strength exercises should be performed with Proximal Stability (proper spine posture and stable scapula) and progressed only if patient can maintain this position while performing the exercise</i></b></p> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>● Continue spine ROM and posture exercises as required (especially C-spine side flexion &amp; T-spine extension and rotation ROM)</li> <li>● Continue hip/pelvis flexibility as required (especially anterior hip structures)</li> <li>● Progress CV exercises</li> </ul>	<ul style="list-style-type: none"> <li>● Patient able to easily set scapula with arms at side AND maintain with dynamic arm activity (below 90° shoulder elevation)</li> <li>● Patient able to perform prescribed dosage of strength exercises with good technique/control and without reproducing pain and/or symptoms</li> <li>● Improved strength of rotator cuff and shoulder girdle musculature from Phase II baseline measures</li> <li>● Improved GH joint ROM from Phase II baseline measures</li> <li>● Patient reports overall increase in use of affected arm in ADL activities</li> <li>● <b><i>IF PATIENT UNABLE TO MANAGE PAIN AT 6 WKS REFER BACK TO PHYSICIAN FOR ADDITIONAL MEANS OF PAIN CONTROL</i></b></li> <li>● <b><i>CONTINUE WITH PROGRAM FOR AN ADDITIONAL 6 WKS.</i></b></li> </ul>

### PHASE III (Week 6 – 12+): Strength & Capacity

GOALS OF PHASE	SPECIFIC TREATMENT INTERVENTION	CRITERIA FOR PROGRESSION TO RTA/ HOME PROGRAM
<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>● ↑ Scapulothoracic &amp; RC strength &amp; endurance</li> <li>● ↑ functional ROM of GH joint and entire U/E kinetic chain</li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>● Return to ADLs, work and some recreational activities</li> <li>● General health/wellness</li> </ul> <p><b>Cautions:</b></p> <ul style="list-style-type: none"> <li>● <b>Avoid exercises/activities in impingement positions</b></li> </ul>	<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>● <b>Scapulothoracic &amp; RC Strengthening</b> <ul style="list-style-type: none"> <li>● Continue from Phase II level - shoulder in neutral at side □ progress to performing exercises at waist level, shoulder level, etc.</li> <li>● Progress to combined, functional movement patterns vs. isolated movements, integrate kinetic chain into ex., utilize isometric, concentric &amp; eccentric contractions</li> <li>● Dosage should progress to reflect strength &amp; endurance goals</li> </ul> </li> </ul> <p><i>All exercise progressions based on patient being able to perform prescribed dosage with good technique (i.e. scapular control) AND without reproducing pain and/or other symptoms</i></p> <ul style="list-style-type: none"> <li>● <b>Functional / UE Kinetic Chain Exercises</b> (wall washing, ball on the bed or wall, functional movement patterns, PNF patterns) <ul style="list-style-type: none"> <li>● Progress dosage, ROM, functional positions, speed, reaction time, L/E challenge</li> </ul> </li> <li>● Closed Kinetic Chain exercises <ul style="list-style-type: none"> <li>● Progress by increasing weight bearing through U/E, adding perturbations, endurance, functional positions, increased integration of kinetic chain, etc.</li> <li>● Quadruped, plank positions, push-ups, etc.</li> </ul> </li> </ul> <p><i>All kinetic chain exercises should be performed with <u>Proximal Stability</u> (proper spine posture and stable scapula) and progressed only if patient can maintain this position while performing the exercise</i></p> <ul style="list-style-type: none"> <li>● Range of Motion / Stretching <ul style="list-style-type: none"> <li>● Continue AROM and stretching as required – focus on combined, functional ROM</li> </ul> </li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>● Activity-specific exercises to address functional goals for returning to ADL/work/recreational activities</li> <li>● Advise on maintaining or increasing CV fitness</li> </ul>	<ul style="list-style-type: none"> <li>● Improved strength and endurance of shoulder girdle musculature from Phase III baseline measures</li> <li>● Patient able to demonstrate proper scapular control with dynamic testing (i.e. GH joint ROM and/or functional movement pattern)</li> <li>● Full functional GH joint AROM <b>Performed with proper scapulohumeral rhythm and minimal pain</b></li> <li>● Patient able to use affected arm in most ADL activities and has been able to return to work/recreational activities</li> <li>● <b><i>IF PATIENT HAS NOT DEMONSTRATED IMPROVEMENT BY 12 WKS., ESPECIALLY IN ER STRENGTH AND OVERHEAD ROM, REFER BACK TO PHYSICIAN FOR CONSIDERATION OF ULTRASOUND</i></b></li> </ul>