

Orthopedic Surgery, Sports Medicine & Arthroscopy Specialists

# Jonathan Watson, MD REHABILITATION PROTOCOL- Nonoperative adhesive capsulitis

The rehabilitation guidelines are presented in a criterion based progression program. Individual patients will progress at different rates depending on their age, associated injuries, pre-injury health status, rehab compliance, tissue quality and injury severity. Specific time frames, restrictions, and precautions may also be given to protect healing tissues and the surgical repair/reconstruction. The therapist should consult the referring physician with any questions or concerns.

#### INDIVIDUAL CONSIDERATIONS

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#### **PHASE 1 (~1-4 weeks)**

REHAB GOALS	1. Gradual restoration of ROM
	2. Minimize swelling & pain
	3. Instruction of exercises to perform at home in addition to PT
PRECAUTIONS	1. Ice/modalities as needed for pain
RANGE OF	<ul> <li>Pendulum exercises</li> </ul>
MOTION	<ul> <li>Supine flexion/IR/ER using opposite arm, towel behind back for IR</li> </ul>
	<ul> <li>Active &amp; passive elbow, wrist, hand ROM, ball squeeze, gripping</li> </ul>
EXERCISES	<ul> <li>Soft tissue mobilizations/techniques as tolerated</li> </ul>
	<ul> <li>CPM (if available) in plane of scapula for IR/ER</li> </ul>
SUGGESTED	<ul> <li>As above</li> </ul>
THERAPEUTIC	<ul> <li>UE- avoid heavy weight. Scapular retraction/elevation,</li> </ul>
EXERCISES	biceps/triceps
EXERCISES	<ul> <li>LE and core activities when pain tolerates</li> </ul>
	<ul> <li>Closed chain- pain free, below shoulder level</li> </ul>
	<ul> <li>Rhythmic stabilization for IR/ER in plane of scapula in modified</li> </ul>
	neutral
CARDIOVASCULAR	Aqua therapy, stationary bike
EXERCISE	
PROGRESSION	<ul> <li>No pain at rest</li> </ul>
CRITERIA	<ul> <li>Compliance with home exercises</li> </ul>
CHILLIAN	<ul> <li>Controlled pain/inflammation</li> </ul>

# **PHASE 2 (~5-8 weeks)**

REHAB GOALS	1. Improve ROM
	2. Minimize pain and swelling
PRECAUTIONS	1. Ice/modalities as needed
	2. Avoid repetitive overhead activities

RANGE OF MOTION EXERCISES	<ul> <li>Continue phase 1 exercises</li> <li>Glenohumeral/scapular mobilizations and soft tissue technique as needed</li> <li>Active assist ROM with pulleys when flexion &gt;130</li> <li>CPM if available</li> </ul>
SUGGESTED THERAPEUTIC EXERCISES	<ul> <li>Continue phase 1 exercises</li> <li>Periscapular muscle strengthening</li> <li>Submax cuff isometrics in neutral</li> <li>Full can scaption, dumbbell row, shoulder extension in prone, single arm cable column pulldown in scapular plane if no dyskinesia</li> <li>Closed chain- below 90 deg elevation</li> <li>Rhythmic stabilization supine IR/ER plane of scapula</li> </ul>
CARDIOVASCULAR EXERCISE	Continue phase 1 Add elliptical, begin without UE UBE
PROGRESSION CRITERIA	<ul> <li>No rest/night pain</li> <li>Home exercise compliance</li> <li>Control of pain/inflammation</li> </ul>

# **PHASE 3 (~9-16 weeks)**

REHAB GOALS	<ul> <li>Gradual restoration of ROM</li> <li>Improve scapular, cuff strength</li> <li>Minimize pain</li> </ul>
PRECAUTIONS	
RANGE OF MOTION EXERCISES	<ul> <li>Continue exercises from phase 2.</li> <li>Can begin gentle end range stretches</li> <li>Pec &amp; sleeper stretches</li> </ul>
SUGGESTED THERAPEUTIC EXERCISES	<ul> <li>Continue exercises from phase 2. Progress weight/resistance</li> <li>LE &amp; core- progress strengthening.</li> <li>UE- trap, lat strengthening</li> <li>Closed chain- quadruped, physioball below 90</li> <li>PNF D2 flexion in supine</li> <li>Wall slides in plane of scapula</li> </ul>
CARDIOVASCULAR EXERCISE	Continue phase 2 Ok to start swimming
PROGRESSION CRITERIA	<ul> <li>No pain with ADLs/rest/night pain</li> <li>Equal active &amp; passive ROM</li> <li>Normalize scapulohumeral kinematics</li> </ul>

# PHASE 4 (~17-22 weeks)

REHAB GOALS	o Full ROM in all planes
	o No pain
	<ul> <li>Improvement of strength, endurance, neuromuscular control</li> </ul>
PRECAUTIONS	Post-activity soreness should resolve within 24 hours
	Avoid post activity swelling
RANGE OF	<ul> <li>Continue with flexibility exercises from previous phase</li> </ul>
MOTION	<ul> <li>Gentle end range stretching</li> </ul>
	<ul> <li>LE and core flexibility</li> </ul>
EXERCISES	<ul> <li>Mobilizations as needed</li> </ul>
SUGGESTED	<ul> <li>Continue phase 3 activities. Progress with resistance/load.</li> </ul>
THERAPEUTIC	<ul> <li>Advance scapular strengthening to prone</li> </ul>
EXERCISES	<ul> <li>PNF D2 standing</li> </ul>
EXERCISES	<ul> <li>Wall pushup progression</li> </ul>
	<ul> <li>Bodyblade modified neutral IR/ER</li> </ul>
	<ul> <li>Plyometrics-week 20 ball toss, side to side toss</li> </ul>
CARDIOVASCULAR	Continue from phase 3, add upper body ergometer if needed. Walk/jog
EXERCISE	progression
PROGRESSION	<ul> <li>No pain with ADLs or PT</li> </ul>
CRITERIA	<ul> <li>Full active ROM</li> </ul>
CITILITIA	<ul> <li>80% strength of contralateral</li> </ul>
	<ul> <li>Normal scapulohumeral rhythm</li> </ul>

#### **PHASE 5 (~23+ weeks)**

REHAB GOALS	Return to sport/work
PRECAUTIONS	Post-activity soreness should resolve within 24 hours Recommend brace usage during initial return to sport, especially contact athletes
RANGE OF MOTION EXERCISES	Continue with flexibility exercises
SUGGESTED THERAPEUTIC EXERCISES	<ul> <li>Progress strengthening from phase 4</li> <li>Advance cuff strengthening to 90 deg abduction</li> <li>Advance bodyblade, PNF, closed chain</li> <li>Plyometrics: bilateral arm throwing patterns beginning with chest pass, progress to single arm. Overhead b/l medicine ball slams &amp; catches. Rebounder IR/ER at 90 abduction, supine IR/ER ball catch &amp; toss. Progress all to single arm.</li> </ul>

	<ul> <li>Ok to begin sport specific overhead work for swimming, tennis, volleyball</li> <li>Overhead athletes- Interval throwing program- Phase 1, progress to phase 2 when completed</li> </ul>
CARDIOVASCULAR EXERCISE	<ul> <li>Jog/run progression. Begin sprinting when able to run 2 miles without pain.</li> <li>Rowing machine, Nordic trak</li> </ul>
PROGRESSION CRITERIA- RETURN TO SPORT	<ul> <li>Pain free, full ROM, uncompensated under fast &amp; resisted conditions</li> <li>90% strength of contralateral side rotator cuff &amp; scapular (at least 70% rotator cuff ratio).</li> <li>Completion of throwing program/sport specific program</li> <li>At least 90% functional closed kinetic chain tests</li> <li>Overhead athletes with normal mechanics/form and no pain post activity</li> </ul>