Campbell Clinic ORTHOPAEDICS

JOSEPH D. LAMPLOT, M.D.
ORTHOPAEDIC SURGERY & SPORTS MEDICINE
(901) 759-3111 | CAMPBELLCLINIC.COM | ONLINE SCHEDULING AVAILABLE
1400 S. GERMANTOWN RD. GERMANTOWN TN 38138
7887 WOLF RIVER BLVD., GERMANTOWN, TN 38138
JLAMPLOT@CAMPBELLCLINIC.COM

Rotator Cuff Impingement Rehabilitation Protocol

The following shoulder impingement guidelines are categorized into four phases, dependent on patient presentation and symptom irritability. Classification and progression are both criteria-based and patient specific. Linear progression through phases may not be indicated. Treatment occurs below shoulder height in phases 1 and 2, and above shoulder height in phases 3 and 4, with phase 2 typically being the longest. The clinician should balance appropriate interventions for the optimization of functional activities and achievement of patient goals, while considering symptom irritability and resolution of impairments.

Phase	Precautions	Treatment Recommendations	Emphasize
Phase 1: Moderate to High Irritability *Criteria for Advancement:* *-Reduced irritability* *-ROM improvement confirming impingement diagnosis* *-Confirm diagnosis*	▪ Avoid pain provoking activities and movements e.g. sleeping on shoulder, reaching, overhead or out to the side, carrying heavy bags with involved extremity, weight bearing on involved extremity. ▪ Avoid painful exercises and activities, e.g. reaching behind back, overhead. ▪ Do not immobilize the shoulder and continue to use the arm in pain-free activities.	▪ Patient education: o Nature of the condition o Activity modification to decrease or eliminate pain o Postural awareness ▪ Postural exercises / re-training ▪ Manual therapy- as indicated based on evaluation o Spinal mobilization/stabilization o Joint mobilization for pain management o PROM o AAROM, e.g. pendulums; forward flexion, internal and external rotation in scapular plane ▪ Strengthening o Peri-scapular muscles ▪ Neuromuscular training, i.e. scapular rhythm training, rhythmic stabilization ▪ Elastic therapeutic taping ▪ Home exercise program (HEP)	▪ Patient understanding of condition ▪ Symptom reduction ▪ Activity modification
Phase 2: Moderate to Low Irritability *Criteria for Advancement:* *-Full range of motion without pain below 90°* *-Good scapular control to 90° without pain in plane of scapula*	▪ Avoid premature increase in activity level ▪ Avoid pain provoking activities and movements	▪ Patient education and activity modification ▪ Joint mobilization – evaluation based o GH, AC, SC, ST, T/S, scapula ▪ Address soft tissue restrictions, e.g. posterior capsule, posterior cuff, levator scapulae, subscapularis, serratus anterior, latissimus dorsi, 1st rib, pectorals ▪ Postural retraining / awareness ▪ Exercises o Utilize the scapular plane o ROM exercises addressing remaining deficits o Advance peri-scapular strengthening o Initiate activation of rotator cuff (pain-free) Isometrics (advancing from short to long duration) progressive isotonics o Neuromuscular strengthening progression Maintain GH position and lever arm o Bilateral UE closed chain exercises for stabilization-	▪ Adjust exercise intensity (time, sets, reps) based on signs and symptoms ▪ Understand pathology ▪ Maximize ROM and flexibility

Phase 2: Moderate to Low Irritability (continued)		progressive load in plane of scapula o Motor control activities for normalization of scapulohumeral rhythm o Dynamic neuromuscular stabilization – humeral head control in FF, scaption, abduction o Core activation exercises, choice of exercises depend on irritability o Kinetic cross-linking exercises e.g. contralateral proximal lower extremity strengthening o Cardiovascular conditioning (non-irritating) o Initiate two hand plyometrics later in phase (short lever arm, e.g., chest pass against plyoback) ▪ Advance HEP as tolerated	
Phase 3: Low to No Irritability *Criteria for Discharge (or Advancement if Return to Sport):* *_-Able to tolerate strengthening exercise in all planes* *-Good scapular control above shoulder height without pain in plane of scapula* *-Pain-free ADL's* *- If returning to sport, consider collaboration with trainer, coach or performance specialist as irritability resolves*	▪ Avoid overloading with PREs ▪ Avoid pain provocation activities and movements	▪ Progress isotonic exercises increasing load ▪ Advance core strengthening, e.g. planks, prone trunk extension over a ball, bird dogs ▪ Single UE closed chain exercises for stabilization ▪ Cardiovascular conditioning ▪ Motor control exercises in multiplanar patterns o Resisted/loaded PNF o Overhead two hand plyometrics progressing to single arm o Total body control ▪ Neuromuscular control and sequencing o Rhythmic stabilization o Proprioceptive dynamic perturbations ▪ Advance HEP as toleratedo Proximal LE	▪ Maximize ROM ▪ Develop strength in previously painful functional positions ▪ Scapulothoracic coupling in overhead positions
Phase 4: Return to Sport (if applicable) *Criteria for Advancement:* *-Independent in appropriate return to sport program, e.g., Thrower's 10 Program,* *- Movement patterns, strength, flexibility, motion, power and accuracy to meet demands of sport* *-Pain free*	▪ Avoid too much, too soon: Monitor exercise dosing ▪ Don't ignore functional progressions ▪ Be certain to incorporate rest and recovery ▪ Monitor for loss of ROM/flexibility	▪ Progress humeral head control exercises in a variety of overhead positions ▪ Progress isotonic exercises to higher loads ▪ Closed kinetic chain progression exercises ▪ Sport-specific multidirectional core retraining, single arm plyometrics, overhead throwing, total body multidirectional motor control and strengthening ▪ Collaboration with trainer, coach or performance specialist	▪ Self-monitoring volume and progressions ▪ Speed, accuracy, power and quality in sport-specific activities ▪ Collaboration with appropriate Sports Performance expert

Protocol adapted from Hospital for Special Surgery Rehabilitation shoulder impingement rehabilitation guidelines

*Signature*_____ *Date*_____