# ADHESIVE CAPSULITIS/FROZEN SHOULDER CLINICAL PRACTICE GUIDELINE

Progression is time and criterion-based, dependent on soft tissue healing, patient demographics, and clinician evaluation. Contact Ohio State Sports Medicine Physical Therapy at 614-293-2385 if questions arise.

## Background

Adhesive capsulitis is characterized by a painful, gradual loss of both active and passive glenohumeral motion in multiple planes resulting from progressive fibrosis and ultimate contracture of the glenohumeral joint capsule. Primary adhesive capsulitis is reported to affect 2% to 5.3% of the general population. The prevalence of secondary adhesive capsulitis related to diabetes mellitus and thyroid disease is reported to be between 4.3% and 38%.

## Clinical Course

**Stage 1:** Painful/Pre-Adhesive Stage (3 months)

- Sharp pain at end ROM, achy pain at rest, sleep disturbance, early loss of ER ROM.
- Diffuse synovial reaction without adhesion or contracture.

**Stage 2**: Freezing/Adhesive Stage (3-9 months)

- Gradual loss of motion in all directions due to pain.
- Aggressive synovitis and angiogenesis, loss of motion under anesthesia.

**Stage 3**: Frozen/Fibrotic Stage (9-15 months)

- Characterized by pain and loss of motion.
- Progressive capsulo-ligamentous fibrosis results in the loss of the axillary fold and ROM.

**Stage 4**: Thawing Stage (15-24 months)

- Pain begins to resolve, but significant stiffness persists.
- Capsulo-ligamentous complex fibrosis, receding synovial involvement.

## Summary of Recommendations

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| **Risk Factors** | • Age: 40-65 years old<br>• Autoimmune Disease<br>• Diabetes Mellitus<br>• Gender: Female<br>• Myocardial Infarction<br>• Prolonged Immobilization<br>• Thyroid Disease<br>• Trauma |
| **Exam** | • Measure pain, postural alignment, shoulder AROM/PROM, strength, functional elevation, key impairments of body function, translational glide of GH joint<br>• Outcome Measure<br>• quickDash, DASH, SPADI, ASES<br>• Activity Limitation<br>• Pain during sleep<br>• Pain & difficulty with grooming & dressing<br>• Pain & difficulty with reaching activities: to the shoulder level, behind the back, and overhead<br>• Impairment<br>• Decreased active and passive shoulder ROM<br>• Loss of glenohumeral joint accessory motion |
| **Diagnosis/ Classification** | Primary Adhesive Capsulitis<br>idiopathic, not associated with history of injury or systemic condition<br><br>Secondary Adhesive Capsulitis<br>related to history of injury, disease or pathology |
| **Interventions** | Corticosteroid injections – reduce inflammation and pain<br>Patent Education – Essential to lessen fear and prevent self-immobilization, encourage activity modification and emphasize functional ROM<br>Modalities – Heat /E-stim/Ice can have a positive benefit on pain and assist with other interventions<br>Stretching Exercises – When matched to irritability can improve ROM & pain. Optimal dosage remains unclear.<br>Joint Mobilization – Match force to tissue irritability<br>Manipulation – When unresponsive to PT |
| **Differential Diagnosis** | Acute calcific tendonitis/bursitis<br>Arthritis: Rheumatoid, Pyogenic<br>Arthrosis/bursitis of the shoulder<br>Avascular necrosis<br>Cervicalgia, cervical disc disorder<br>Cervico-brachial syndrome<br>Contusion of shoulder/upper arm<br>Fibromyalgia<br>Fracture-clavicle/scapula/humerus<br>Impingement syndrome<br>Labral lesions<br>Neoplasm<br>OA of AC or …GH joint/cervical spine<br>Osteoporosis-pathological fracture<br>Pain in thoracic spine<br>Radiculopathy<br>Rotator cuff syndrome<br>Sprain/strain AC/SC/GH joints<br>Tendinopathy-supra/infra/biceps |
| **Criteria for Discharge** | • Independent pain management & home exercise program<br>• Normal postural alignment<br>• Increased ROM to match unaffected side<br>• Improved muscle performance, strength & endurance<br>• Functional use of affected UE<br>• Normal GH and scapulo-thoracic biomechanics |

## Phase I: Painful/Pre-Adhesive Stage (3 months)

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|---|---|
| **Content** | • Modalities: Heat/Ice/E-Stim PRN<br>• Postural correction exercises/Scapular retraction<br>• PROM/AAROM Therapeutic Ex: Codman's, table/wall slides, cane<br>• End range GH joint stretching, 5-10 second hold as tolerated<br>• GH mobilization, long axis distraction to maximize ROM<br>• Daily Home Exercise and Icing Program |
| **Criteria to Progress** | • Tolerance of 10 second end-range stretches<br>• Full AROM of extension/adduction<br>• Improving AROM of flexion, abduction, ER, IR |

## Phase 2: Freezing/Adhesive State (3-9 months)

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| **Content** | • Modalities: Heat/Ice/E-Stim PRN<br>• Postural correction exercises/Scapular retraction<br>• PROM/AAROM Therapeutic Ex: Codman's, table/wall slides, cane<br>• End range GH joint stretching, 15-20 second hold as tolerated<br>• GH mobilization, long axis distraction to maximize ROM<br>• Daily Home Exercise and Icing Program |
| **Criteria to Progress** | • Tolerance of 20 second end-range stretches<br>• Full AROM of extension/adduction/IR/abduction<br>• Improving AROM of flexion, ER |

## Phase 3: Frozen/Fibrotic State (9-15 months)

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| **Content** | • Modalities: Heat/Ice/E-Stim PRN<br>• Postural correction exercises/Scapular retraction<br>• PROM/AAROM Therapeutic Ex: Codman's, table/wall slides, cane<br>• End range GH joint stretching, 20-30 second hold as tolerated<br>• GH mobilization, long axis distraction to maximize ROM<br>• Gravity Resisted Strength Work: Scapular, Rotator Cuff, Deltoid<br>• Daily Home Exercise and Icing Program |
| **Criteria to Progress** | • Tolerance of 30 second end-range stretches<br>• Full PROM flexion/ER<br>• Gravity resisted strength work to 1x30 repetitions each |

## Phase 4: Thawing Stage (15-24 months)

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| **Content** | • Modalities: Heat/Ice/E-Stim PRN<br>• Postural correction exercises/Scapular retraction<br>• AAROM/AROM Ther Ex: Supine/side-lying/standing postures<br>• Resisted Strength Work: Scapular, Rotator Cuff, Deltoid<br>• Resisted Strength Work: Free Weights, Theraband, PNF Scapular, Rotator Cuff, Deltoid, Biceps, Triceps, Closed Chain<br>• Daily Home Exercise and Icing Program |
| **Criteria to Progress** | • Independent pain management and home exercise program<br>• Normal postural alignment<br>• Increased ROM to match unaffected side<br>• Improved muscle performance, strength & endurance<br>• Functional use of affected UE<br>• Normal GH and scapula-thoracic biomechanics |

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**References**

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