



# Sports & Orthopaedic Specialists

## Adhesive Capsulitis Protocol

This protocol provides appropriate guidelines for the rehabilitation of patients with adhesive capsulitis. The protocol draws evidence from the current literature and accounts for preferences of the providers at Sports & Orthopaedic Specialists. The program may be modified by the referring provider for an individual patient. If questions arise regarding the utilization of the protocol or the progress of the patient, contact Sports & Orthopaedic Specialists:

Main line: (952) 946-9777

Physical therapy: (952) 914-8631

### Rehab Principles & Overview

- Focus on active engagement of the patient through patient education and therapeutic exercise. Establish a home exercise program that can be progressed as range of motion improves and symptoms decline.
- Home program should result in minimal to no symptom exacerbation. Max pain of 3/10 during and after exercise. The patient should call the PT for recommendations if pain increases during or after exercise.
- The main goal of physical therapy is to facilitate a slow and progressive return to functional range of motion. Address the development of functional strength once motion is nearly resolved.
- Complete 4-6 visits of physical therapy over 2-6 months.
- Consider local tissue irritability (Table 1) in decision making when determining intervention. Use caution to avoid post-treatment tissue inflammation and associated pain.

**TABLE 1.** Local Tissue Irritability. Patients must meet 3+/5 criteria to be categorized appropriately.

| High   | Moderate  | Low  |
|--|---|--|
| High levels of pain ( $\geq 7/10$ )                                    | Moderate levels of pain (4-6/10)                    | Low levels of pain ( $\leq 3/10$ )                   |
| Consistent pain at rest and/or at night                                | Intermittent pain at rest and/or at night           | No rest or night pain                                |
| Pain before end range AROM is significantly less than PROM due to pain | Pain at end range AROM is similar to PROM           | Minimal pain with overpressure AROM is equal to PROM |
| High disability on standardized outcome measure                        | Moderate disability on standardized outcome measure | Low disability on standardized outcome measure       |



## THERAPEUTIC EXERCISE

There is no intervention more effective than therapeutic exercise for painful shoulder conditions. However, there is no consensus on the ideal exercise program to treat patients with adhesive capsulitis, therefore preferences from Sports & Orthopaedic Specialists providers are below:

-Four to six physical therapy visits over 2-6 months.

Recommend clinic visits in PT every 3-4 weeks to allow sufficient change in ROM between visits.

Recommend measuring ROM with a goniometer in all planes at every clinic visit.

-Start with basic exercises and progress to more challenging exercises as symptoms decline. Intensity of exercises should be determined by local tissue irritability level.

-Prescribe HEP 5-7x/week initially when the clinical focus is gentle improvement of ROM.

-Once ROM is restored to ~85% as compared to the uninvolved shoulder, continue with self-stretching exercises as needed and TRANSITION TO STRENGTHENING USING THE CONSERVATIVE IMPINGEMENT PROTOCOL.

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The exercises on the next page may be beneficial in treating patients with adhesive capsulitis and are preferred by providers at Sports & Orthopaedic Specialists.

In each section, exercises are listed in progressive order from gentle to challenging. Notations are made relating exercises to an appropriate level of local tissue irritability for introduction.

The goal for all exercises is 3x30 seconds with minimal to no increase in pain during exercise. Pain should return to baseline within one hour of completion.

Teach the patient that painful exercises do **not** facilitate improvement in a painful joint. If flares in pain occur during or for more than 2 hours after exercises that they should stretch more gently next time.

Recommended max of 6 exercises for home exercise program. Select a well-rounded program that targets each area of insufficiency identified during physical exam.

# Adhesive Capsulitis Protocol



Page numbers below reference the THERAPEUTIC EXERCISE HANDOUT. The PDF for the TherEx Handout file containing instructions and pictures for each exercise can be printed from the Sports & Orthopaedic Specialists website:

[www.sportsandortho.com/minneapolis/rehabilitation-center.htm](http://www.sportsandortho.com/minneapolis/rehabilitation-center.htm)

|                            | <u>Page</u> | <u>Tissue Irritability</u> |
|----------------------------|-------------|----------------------------|
| <b>Posterior Shoulder</b>  |             |                            |
| Wand internal rotation     | 6           | High                       |
| Golfer stretch             | 4           | Moderate-High              |
| Behind the back stretch    | 5           | Moderate                   |
| Sleeper stretch            | 4           | Low                        |
| <b>Anterior Shoulder</b>   |             |                            |
| Wand extension             | 6           | High                       |
| ER stretch with wand       | 7           | High                       |
| ER stretch with door       | 7           | Moderate                   |
| ER stretch with table      | 8           | Moderate                   |
| ER cactus stretch          | 8           | Low                        |
| Lounge chair stretch       | 5           | Low                        |
| <b>Inferior Capsule</b>    |             |                            |
| Prayer Stretch             | 9           | High-moderate              |
| Wall slide                 | 9           | Low                        |
| <b>Thoracic Mobility</b>   |             |                            |
| Thoracic extension - Towel | 26          | High                       |
| Thoracic Ext – Foam Roller | 26          | Moderate-low               |
| <b>Shoulder + Trunk</b>    |             |                            |
| Alligator                  | 10          | Low                        |
| Large arm circle           | 10          | Low                        |



## THERAPEUTIC ACTIVITY AND PATIENT EDUCATION

Patient education is very important in getting the patient to take an active role in therapy and recovery. Educate the patient at the appropriate level regarding:

- Anatomy of the shoulder girdle
- Shoulder girdle mechanics: Typical and pathomechanical
- The inhibitory effect of pain on the rotator cuff
- Activity modification & avoidance of pain provoking activities
- Effect of posture on shoulder pain and mechanics
- Ergonomics for typing, carrying, lifting, etc
- Preferred positioning of the shoulder during sleep
  
- Prognosis. Longer duration of pain, higher pain severity at presentation, and lower baseline function at evaluation are associated with a less positive outcome. Discuss prognostic indicators of increased length of time to resolution for adhesive capsulitis (thyroid disorders, diabetes, fair skinned phenotype).
  
- Sports and activities: Refrain from activities that directly involve the shoulder until cleared for participation by referring physician. Ok for activities such as recumbent stationary bike (no weight bearing through shoulders), elliptical using stationary hand holds, walking on the treadmill.
  
- Weight lifting: Refrain during shoulder pain. Return initially to biceps curls, triceps press, seated row once pain free with ADL and rotator cuff strength is pain free and symmetrical. Discuss additional exercises with physician at recheck. In the short term, ok for core (without weight bearing through the shoulders), cardio, and legs.



## MANUAL THERAPY

**TABLE 2.** Summary of evidence and Sports & Orthopaedic Specialists provider preferences regarding manual therapy use in adhesive capsulitis. Complete a maximum of 10 minutes of manual therapy.

| Manual Therapy Technique                              | Summary of Evidence   | SAOS Provider Preference   |
|---|---|--|
| <b>Glenohumeral Accessory Mobilization</b>            | Weak evidence that mobilizations directed to the glenohumeral joint reduce pain and increase motion and function. | Ok for use as an adjunct to therapeutic exercise in patients with low to moderate local tissue irritability. Match mobilization force to tissue irritability. Focus on posterior shoulder mobility. Max of 5-10 minutes. |
| <b>Soft Tissue Mobilization</b>                       | None  | Use sparingly. Soft tissue mobilization to (upper trapezius and interscapular region) may be appropriate and must not exacerbate symptoms. Three to five minutes maximum.  |
| <b>Physiologic (Long Arc) Passive Range of Motion</b> | None  | Do not use   |



## MODALITIES

Across the literature, there is moderate evidence that passive intervention with modalities is **NOT** justified in treating adhesive capsulitis. See Table 3 for a summary of evidence and Sports & Orthopaedic Specialists provider preferences regarding modality use in adhesive capsulitis.

**TABLE 3**

| Modality                  | Summary of Evidence  | SAOS Provider Preference   |
|---------------------------|--|--|
| <b>Cold Therapy / Ice</b> | Limited evidence regarding the effect of cold therapy on adhesive capsulitis.<br><br>Strong evidence supports the use of ice for localized pain control. | Encourage patient use. Daily for patients with moderate or high local tissue irritability. As needed for patients with low tissue irritability. 10-15 minutes. Ice pack not placed directly on skin. |
| <b>Ultrasound</b>         | Weak evidence that US results in improved pain, ROM, function.   | Do not use   |
| <b>Iontophoresis</b>      | No evidence  | Do not use   |
| <b>Heat therapy</b>       | No evidence  | Ok for use for chronic shoulder pain/stiffness   |