

## **Nonoperative Treatment of Subacromial Impingement Rehabilitation Protocol**

Subacromial impingement is a chronic inflammatory process produced as one of the Rotator Cuff Muscle the and the Subdeltoid Bursa are “pinched” against the Coracoacromial Ligament and/or the Anterior Acromion when the arm is raised above the head. The supraspinatus portion of the rotator cuff is the most common area of impingement. This syndrome is commonly seen in individuals who use their arm repetitively in a position above the shoulder height. This condition also occurs in the golfer, tennis player and swimmer.

This 4-phased program can be utilized for conservative impingement clients. The protocol serves as a guide to attain maximal function in a minimal time period. This systematic approach allows specific goals and criteria to be met and ensures the safe progression of the rehabilitation process. Client compliance is critical.

### **I. Maximal Protection – Acute Phase**

- Goals:
1. Relieve pain and inflammation
  2. Normalize range of motion
  3. Re-establish muscular balance
  4. Patient education and improve posture

Avoidance:

- The elimination of any activity that causes an increase in symptoms

Range of Motion:

- L-Bar
  - Flexion
  - Elevation in scapular plane
  - External and Internal rotation in scapular plane at 45° abduction
    - Progress to 90° abduction
  - Horizontal abduction/adduction
- Pendulum exercises
- AAROM – Limited symptom free available range of motion
  - Rope and pulley
    - Flexion

Joint Mobilizations:

- Emphasize
- Inferior and posterior glides in scapular plane
- Goal is to establish balance in the glenohumeral joint capsular

Modalities:

- Cryotherapy
- Iontophoresis

Strengthening Exercises:

- Rhythmic stabilization exercises for ER/IR
- Rhythmic stabilization drills Flex/Ext
- External rotation strengthening
  - If painful isometrics (ER, IR, Abd)
- Scapular strengthening
  - Retractors
  - Depressors
  - Protractors

Patient Education:

- Educate patient regarding activity level, activities
- Pathology and avoidance of overhead activity, reaching, and lifting activity
- Correct seating posture (consider lumbar roll)
- Seated posture with shoulder retraction

Guideline for Progression:

1. Decreased pain and/or symptoms
2. Normal ROM
3. Elimination of painful arc
4. Muscular balance

## II. Intermediate Phase

- Goals:
1. Re-establish non-painful ROM
  2. Normalize athrokinematics of shoulder complex
  3. Normalize muscular strength
  4. Maintain reduced inflammation and pain

Range of Motion:

- L-Bar
  - Flexion
  - External rotation at 90° of abduction
  - Internal rotation at 90° of abduction
  - Horizontal abduction/adduction at 90°
- Rope and pulley
  - Flexion
  - Abduction (symptom free motion)

Joint Mobilization:

- Continue joint mobilization techniques to the tight aspect of the shoulder (esp. inferior)
- Initiate self-capsular stretching
- Grade II/III/IV
- Inferior, anterior and posterior glides
- Combined glides as required

Modalities: (as needed)

- Cryotherapy
- Ultrasound/phonophoresis
- Iontophoresis

Strengthening Exercises:

- Progress to complete shoulder exercise program
- Emphasize rotator cuff and scapular muscular training
  - ER tubing
  - Sidelying ER
  - Full can
  - Shoulder abduction
  - Prone horizontal abduction
  - Prone rowing
  - Prone horizontal abduction ER
  - Biceps/triceps
  - Standing lower trapezius muscular strengthening

Functional Activities:

- Gradually allow an increase in functional activities
- No prolonged overhead activities
- No lifting activities overhead

**III. Advanced Strengthening Phase**

- Goals:
1. Improve muscular strength and endurance
  2. Maintain flexibility and ROM
  3. Gradual increase in functional activity level

Flexibility and Stretching:

- Continue all stretching and ROM exercises
- L-Bar ER/IR at 90° abduction
- Continue capsular stretch
- Maintain/increase posterior/inferior flexibility

Strengthening Exercises:

- Establish patient on the fundamental shoulder exercises (see attached sheet)
  - Tubing ER/IR
  - Lateral raises to 90° dumbbell
  - Full can dumbbell
  - Sidelying ER
  - Prone horizontal abduction
  - Prone extension
  - Push-ups
  - Biceps/triceps

Guideline for Progression to Phase IV:

1. Full non-painful ROM
2. No pain or tenderness
3. Strength test fulfills criteria
4. Satisfactory clinical examination

**IV. Return to Activity Phase**

Goals: 1. Unrestricted symptom free activity

Initiate Interval Sport Program: (see sheet)

- Throwing
- Tennis
- Golf

Maintenance Exercise Program:

Flexibility Exercises

- L-Bar:
  - Flexion
  - External rotation and internal rotation at 90° abduction
  - Self-capsular stretches

Isotonic Exercises

- Fundamental shoulder exercises
- Perform 3 times a week

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