Najib Ussef, MD
Orthopedic Surgery

Rotator Cuff Tendonitis/Impingement Rehabilitation Protocol

Name: _____ **Date: _____**

Diagnosis: _____ **Date of Surgery: _____**

INTRODUCTION:

- Impingement is a chronic inflammatory process produced as the Rotator Cuff Muscles (supraspinatus, infraspinatus, teres major, and subscapularis) and the Subdeltoid Bursa are pinched against the coracoacromial ligament and the anterior acromion when the arm is raised above 90 degrees. The supraspinatus/infraspinatus portion of the rotator cuff is the most common area of impingement. This syndrome is commonly seen in throwing sports, racquet sports, and in swimmers; but can be present in anyone who uses their arm repetitively in a position over 90 degrees of elevation .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.

☐ **ACUTE PHASE –MAXIMAL PROTECTION**

- **Goals**:
  - Relieve pain and swelling
  - Decrease inflammation
  - Retard muscle atrophy
  - Maintain/increase flexibility
  - Active Rest: the elimination of any activity that causes an increase in symptoms
- **Range of Motion Exercises**
  - Pendulum Exercises
  - AAROM –Limited symptom free available range
  - Rope & Pulley
    - flexion
  - L-Bar
    - Flexion
    - Neutral external rotation
- **Joint Mobilizations**
  - Inferior and posterior glides in scapular plane
- **Modalities**
  - Cryotherapy
  - TENS
- **Strengthening Exercises**
  - Isometrics –submaximal
  - External/internal rotation
  - Biceps
  - Deltoid (anterior, middle, posterior)
- **Patient Education**
  - Regarding activity, pathology and avoidance of overhead activity, reaching, and lifting activity
- **Guidelines for Progression**
  - Decreases pain and/or symptoms
  - ROM increased
  - Painful arc in abduction only
  - Muscular function improved

☐ **SUBACUTE PHASE –MOTION PHASE**

- **Goals**
  - Re-establish non-painful ROM
  - Normalize arthrokinematics of shoulder complex
  - Retard muscular atrophy
- **Range of Motion**
  - Rope & Pulley
    - Flexion
    - Abduction
  - L-Bar
    - Flexion
    - Abduction (symptom free motion)
    - External rotation in 45° of abduction, progress to 90° of abduction
    - Internal rotation in 45° of abduction, progress to 90° of abduction
  - Initiate anterior and posterior capsular stretching
- **Joint Mobilizations**
  - Inferior, anterior, and posterior glides
- **Modalities**
  - Cryotherapy
  - Ultrasound/phonophoresis
- **Strengthening Exercises**
  - Continue isometrics exercises
  - Initiate scapulothoracic strengthening exercises
  - Initiate neuromuscular control exercises
- **<u>Guidelines for Progression</u>**
  - Begin to incorporate intermediate strengthening exercises as:
    - Pain/symptoms decrease
    - AAROM normalizes
    - Muscular strength improves

☐ **INTERMEDIATE STRENGTHENING PHASE**

- **Goals**
  - Normalized ROM
  - Symptom-free normal activities
  - Improved muscular performance
- **Range of Motion**
  - Aggressive L-Bar AAROM all planes
  - Continue self-capsular stretching (anterior/posterior)
- **Strengthening Exercises**
  - Initiate isotonic dumbbell program
    - Sidelying neutral
      - internal/external rotation
    - Prone
      - extension
      - horizontal abduction
    - Standing
      - flexion to 90°
      - abduction to 90°
  - Initiate serratus exercises
    - Wall push-ups
  - Initiate tubing progression in slight abduction for internal/external rotation
- **<u>Guidelines for Progression</u>**

- Full non-painful ROM
- No pain/tenderness
- 70% Contralateral strength

☐ **DYNAMIC ADVANCED STRENGTHENING PHASE**

- **Goals:**
  - Increase strength, power, endurance
  - Increase neuromuscular control
- **Strengthening Exercises**
  - Initiate Thrower's Ten Exercise Program (if overhead athlete)
  - Isokinetics
    - Progress from modified neutral to 90/90 position as tolerated
  - Initiate plyometric exercises (Late in phase)
- **<u>Guidelines for Progression</u>**
  - Full non-painful ROM
  - No pain or tenderness
  - Isokinetic test fulfills criteria
  - Satisfactory clinical exam

☐ **RETURN TO ACTIVITY PHASE**

- **Goals**
  - Unrestricted symptom-free activity
- **Initiate Interval Program**
  - Throwing
  - Tennis
  - Golf
- **Maintenance Exercise Program**
  - Flexibility Exercises
    - L-Bar
      - Flexion
      - External rotation
      - Self-capsular stretches
  - Isotonic exercises
    - Supraspinatus
    - Prone extension
    - Prone horizontal abduction
  - Thera-tubing exercises
    - Internal/external rotation
    - Neutral or 90/90 position
  - Serratus push-ups
  - Interval throwing phase II for pitchers

Comments:

Frequency: _____ times per week **Duration: _____ weeks**

Signature: _____ **Date: _____**