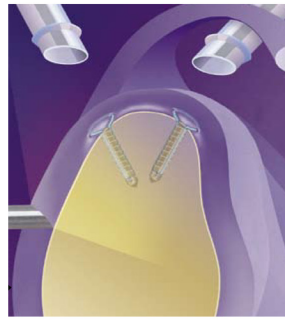


# General Rehabilitation Guidelines

Program after Repair of SLAP Lesion



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## Precautions:

- *Basis*
  - The anchor of the biceps tendon into the superior glenoid rim is reattached and secured with sutures. This must heal back into the bone before significant stress can be placed on the biceps tendon
  - Motions which stretch the biceps tendon through the bicipital groove will pull on the repair and may cause it to fail prior to healing
    - Internal rotation up the back, excessive external rotation in neutral and abduction, shoulder extension
    - These should be progressed slowly to balance healing with recovery of motion
- *Precautions*
  - no external rotation past 20° and no forward elevation past 120° for 3 weeks
  - no internal rotation up the back until Week 7

## General Principles and Guidelines

- **ROM:** passive → active assisted → active
  - Restore normal proprioception and movement patterns (especially scapulothoracic)
- **Strength**
  - Should be pain free
  - Train muscle groups (force couples) rather than individual muscles
  - Incorporate contralateral therapy
  - Isometric → eccentric → concentric
- Scapula Based Rehabilitation Program
  - Evaluate and correct postural alignment (lumbopelvic, thoracolumbar, scapulothoracic)
  - Clear soft tissue restrictions
  - Establish scapulothoracic stability focusing on scapular position and control
- **See attached exercise list**

## Prehabilitation

- Instruct in application of ice and encourage use as much as tolerated within a 24 hour period for first week. If using ice packs, encourage to ice 20-30 minutes every 3-4 hours while awake
- Instruct in pendulum exercises to be performed 2-3 times per day starting immediately following surgery
  - These should be followed by cryotherapy session
- Instruct in basic progression of rehabilitation program and expectations for time course to recovery
- Arrange follow-up physical therapy appointment on 7<sup>th</sup>-10<sup>th</sup> day post-op to correspond with physician's post-operative evaluation

## **Outpatient Phase 1:** (Weeks 1 - 4)

### **Goals**

- Protect surgical repair
- Minimize effects of immobilization
- Diminish pain and inflammation
- **ROM**
  - Instruct in home program and begin glenohumeral ROM (passive and active-assisted only)
    - Codman's exercises
    - Forward elevation and scaption to 120° until Week 4 and then progress to 15° increments per week
    - External rotation at neutral and 45° to 20° until Week 4 and then progress to 15° per week (AA with cane/wand)
    - Internal rotation in scapular plane as tolerated
    - No internal rotation up the back
    - No extension
    - No cross body adduction
  - Grade I – II glenohumeral and scapular mobilizations
  - Cervical, wrist, elbow ROM
- **Strength**
  - Instruct in home program and begin closed chain submaximal isometrics in neutral abduction
    - Shoulder IR, ER, abduction
    - No shoulder flexion or extension isometrics
    - No elbow flexion isometrics or isotonic strengthening
  - Correct postural abnormalities and scapular position through muscle reeducation
  - Isometric scapular retraction, depression and shrugs
  - Trunk extension/scapular retraction
    - Emphasize lower trapezius activation (elbow in back pocket)
  - Upper quarter pivots
  - Grip strengthening
- **Sling**
  - Sling or Ultrasling during the day and at night for 3 weeks
  - Remove 2-3 times per day for axillary care and exercises
- **Other**
  - Instruct to don and doff sling
  - Decrease pain and inflammation and muscles guarding
  - Incision mobilization and desensitization

## **Outpatient Phase 2:** (Weeks 5 - 8)

- **ROM**
  - Progressive increase in GH ROM
    - Forward elevation and scaption: increase in increments of 15° per week
    - May add pulley, table top stretch and wall climb
    - Add side-lying IR in abduction stretch and cross body adduction stretch for posterior capsule
  - External rotation: increase in increments of 15° per week

- Approach contralateral ER and side by 8 weeks
  - Wand exercises for ER stretches
  - At week 7 can begin stretching into external rotation at 60 degrees abduction and progress to 90° as tolerated
- Progress to full internal rotation in scapular plane
- May begin IR up back with towel stretch at Week 7
- May begin extension at Week 7
- May begin Grade III-IV glenohumeral and scapulothoracic mobilizations at Week 7
- **Strength**
  - Begin isotonic cuff strengthening with bands in IR, ER and abduction (no flexion)
    - Use towel roll between arm and thorax
    - Focus on reestablishing muscular balance, particularly ER/IR muscle ratio
    - No elbow flexion strengthening until Week 7 and then may begin isometrics and scaption in IR (no scaption or FE in ER)
    - Triceps isometric and isotonic
  - Submaximal dynamic stabilization
    - At Week 7 scapulothoracic and upper quarter coordination with PNF patterns
      - Scapular anterior and posterior elevation and anterior and posterior depression
      - Closed chain axial load (ball rolls on table top) to emphasize scapular positioning
      - As healing progresses and ROM returns may progress to wall wash
  - May use UBE especially in reverse for scapular strengthening
    - Increase resistance starting with minimal and progressing
  - Stress core strength
  - Begin lower body cardiovascular conditioning and endurance
  - At Week 7 begin supraspinatus program: scaption in internal rotation, flexion, press-ups
- **Sling**
  - D/c use of sling/immobilizer
- **Other**
  - Modalities as indicated to control and decrease pain/inflammation/muscle guarding
  - Incision mobilization and desensitization

### **Outpatient Phase 3:** (Weeks 9 - 12)

- **ROM**
  - Progressive return to full ROM and flexibility
  - Progress stretching into external rotation in 80-90 degrees abduction
  - Emphasize home program for four-quadrant capsular stretching
  - Include anterior chest wall stretching
  - Grade III and IV glenohumeral and scapulothoracic mobilization
- **Strength and control**
  - Full cuff program with concentric and eccentric strengthening

- Include prone exercises (abduction, scaption, ER)
- ER/IR ratio to 65-75%
- Dynamic strengthening at 90-90 position for external and internal rotationx
- Isotonic biceps and triceps strengthening
- Advance eccentric and concentric scapular stabilization
  - Shrugs, seated rows, prone rows, low rows, chair press-ups, supine serratus anterior, lat pull downs, prone posterior deltoid, reverse corner pushups, push-up plus, biceps, and triceps
  - Scapular punches with various weights and positions
  - Shoulder dumps and diagonal punches with light hand weights
  - Increase strength and control of scapular stabilization and glenohumeral muscle synergy
- Progress PNF patterns
- Begin upper body ergometers beginning at low resistance and height below 90° and slowly progress to height at 140° flexion
- Plyometric training drills in throwing athletes

**Functional Phase:** (Weeks 13 - 16)

- Develop sport or work specific ROM
- Initiate isokinetic rotator cuff strengthening at high speeds for muscular endurance; i.e. 240 degrees/second X 30 second bout with 30 second rest, 300 degrees/second X 30 second bout with 30 second rest, etc.
- Initiate functional upper extremity proprioception/functional progression activities. Please refer protocol. For throwing athlete, if dominant arm, initiate short/long toss program with tennis ball progressing to full throwing for both distances and speed. Please refer to Interval Throwing Program
- Sport or work specific kinematics and exercises including one handed plyometrics
- Sport or work specific drills for quickness and agility, endurance and power
  - High resistance UBE
- Return to play