

## Non-operative Rehabilitation for Multi-Directional Instability

This multi-phased program is designed to allow the patient/athlete to return to their previous functional level as quickly and safely as possible. Each phase will vary in length for each individual depending upon the severity of injury, ROM/strength deficits, and the required activity demands of the patient.

### I. PHASE I – ACUTE PHASE

Goals: Decrease pain/inflammation  
Re-establish functional range of motion  
Establish voluntary muscular activation  
Re-establish muscular balance

#### Improve proprioception

- **Decrease Pain/Inflammation**
  - Therapeutic modalities (ice, electrotherapy, etc.)
  - NSAIDS
  - Gentle joint mobilizations (Grade 1 and II) for neuromodulation of pain
- **Range of Motion Exercises**
  - Gentle ROM exercises – no stretching
  - Pendulum exercises
  - Rope and pulley
    - Elevation to 90 degrees, progressing to 145/150 degrees flexion
- L-Bar
  - Flexion to 90 degrees, progressing to full ROM
  - Internal rotation with arm in scapular plane at 45 degrees abduction
  - External rotation with arm in scapular plane at 45 degrees abduction
    - Progressing arm to 90 degrees abduction
- **Strengthening Exercises**
  - Isometrics (performed with arm at side)
    - Flexion
    - Abduction
    - Extension
    - External rotation at 0 degrees abduction
    - Internal rotation at 0 degrees abduction
    - Biceps
    - Scapular isometrics
      - Retraction/protraction
      - Elevation/depression
    - Weight shifts with arm in scapular plane (closed chain exercises)
    - Rhythmic stabilizations (supine position)
      - External/internal rotation at 30 degrees abduction
      - Flexion/extension at 45 and 90 degrees flexion

**\*\*Note:** *It is important to refrain from activities and motion in extreme ranges of motion early in the rehabilitation process in order to minimize stress on joint capsule.*

- **Proprioception/Kinesthesia**
  - Active joint reposition drills for ER/IR

## **II. PHASE II – INTERMEDIATE PHASE**

**Goals:** Normalize arthrokinematics of shoulder complex  
 Regain and improve muscular strength of glenohumeral and scapular muscle  
 Improve neuromuscular control of shoulder complex  
 Enhance proprioception and kinesthesia

***Criteria to Progress to Phase II:***

- Full functional ROM
- Minimal pain or tenderness
- "Good" MMT
- **Initiate Isotonic Strengthening**
  - Internal rotation (sidelying dumbbell)
  - External rotation (sidelying dumbbell)
  - Scaption to 90 degrees
  - Abduction to 90 degrees
  - Prone horizontal abduction
  - Prone rows
  - Prone extensions
  - Biceps
  - Lower trapezius strengthening
- **Initiate Eccentric (surgical tubing) Exercises at Zero Degrees Abduction**
  - Internal rotation
  - External rotation
- **Improve Neuromuscular Control of Shoulder Complex**
  - Rhythmic stabilization drills at inner, mid, and outer ranges of motion (ER/IR, and Flex/Ext)
  - Initiate proprioceptive neuromuscular facilitation
    - Scapulothoracic musculature
    - Glenohumeral musculature
      - Open kinetic chain at beginning and mid ranges of motion
        - PNF
        - Manual resistance
          - External rotation
            - Begin in supine position progress to sidelying
            - Prone rows
        - ER/IR tubing with rhythmic stabilization
      - Closed kinetic chain
        - Wall stabilization drills
          - Initiated in scapular plane
          - Progress to stabilization onto ball
          - Weight shifts had on ball
    - Initiate core stabilization drills
      - Abdominal
      - Erect spine
      - Gluteal strengthening
  - **Continue Use of Modalities (as needed)**
    - Ice, electrotherapy

### **III. PHASE III – ADVANCED STRENGTHENING PHASE**

**Goals:** Enhance dynamic stabilization  
Improve strength/endurance  
Improve neuromuscular control  
Prepare patient for activity

***Criteria to Progress to Phase III:***

- Full non-painful ROM
- No pain or tenderness
- Continued progression of resistive exercises
- Good to normal muscle strength
- **Continue Use of Modalities (as needed)**
- **Continue Isotonic Strengthening (PRE's)**
  - Fundamental shoulder exercises II
- **Continue Eccentric Strengthening**
- **Emphasize PNF Exercises (D2 pattern) With Rhythmic Stabilization Hold**
- **Continue to Progress Neuromuscular Control Drills**
  - Open kinetic chain
    - PNF and manual resistance exercises at outer ranges of motion
  - Closed kinetic chain
    - Push-ups with rhythmic stabilization
      - Progress to unsteady surface
        - Medicine ball
        - Rocker board
      - Push-ups with stabilization onto ball
      - Wall stabilization drills onto ball
- **Initiate Isokinetics**
  - Abduction/adduction
  - Internal/external rotation
- **Program Scapular Neuromuscular Control Training**
  - Sidelying manual drills
  - Progress to RS and movements (quadrant)
- **Emphasize Endurance Training**
  - Time bouts of exercise 30-60 sec
  - Increase number of reps
  - Multiple bouts during day (TID)

#### IV. **PHASE IV – RETURN TO ACTIVITY PHASE**

**Goals:** Maintain level of strength/power/endurance  
Progress activity level to prepare patient/athlete for full functional return to activity/sport

***Criteria to Progress to Phase IV:***

- Full non-painful ROM
- No pain or tenderness
- Satisfactory isokinetic test
- Satisfactory clinical exam

- **Continue all exercises as in Phase III**
- **Initiate Internal Sport Program (if appropriate)**
- **Patient Education**
- **Continue Exercise on Fundamental Shoulder Exercise II**