

Non-Operative Rehabilitation for Multi-Directional Instability

I. PHASE I – INTIAL PHASE

- Goals:**
- Decrease pain/inflammation
 - Establish voluntary muscular activation
 - Activate Scapular muscle control & stable base of support
 - Re-establish muscular balance
 - Enhance proprioception
 - Restore functional pain-free ROM

Decrease Pain/Inflammation

- Therapeutic modalities (Ice, Laser, Iontophoresis etc.)
- NSAIDS if necessary
- 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 (non-painful ROM)
 - Internal rotation with arm in scapular plane at 45 degrees abduction
 - External rotation with arm in scapular plane at 45 degrees abduction

Muscle Activation Exercises

- Rhythmic stabilization drills for the GH joint musculature
 - ER/IR in scapular plane at 45 deg. abduction
 - Flex/Ext at 90-100 deg. of elevation scapular plane (supine)
 - Activation exercises for the scapular muscles
 - Neuromuscular control drills for the scapular muscles
 - Emphasize the impaired muscles which are usually LT,MT & Rhomboids
 - Isometrics
 - External rotation at 0 degrees abduction*
 - Internal rotation at 0 degrees abduction
 - Shoulder adduction isometrics into towel roll
 - Shoulder flexion & abduction below 90 degrees abduction
 - Biceps
 - Triceps
 - Weight shifts with arm in scapular plane (wt bearing exercises) against wall
- **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
- *Muscle stimulation applied to infraspinatus during exercises

Proprioception/Kinesthesia

- Active joint reposition drills for ER/IR & shoulder Flex/Ext

II. PHASE II – INTERMEDIATE PHASE

- Goals:**
- Restore functional ROM without symptoms
 - Normalize arthrokinematics of shoulder complex
 - Improve muscular strength of glenohumeral & scapula
 - Improve dynamic stabilization
 - 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

- ER/IR at 0 deg with exercise tubing – perform RS at end range
- Internal rotation (sidelying dumbbell)
- External rotation (sidelying dumbbell)
- Scaption to 90 degrees
- Abduction to 90 degrees
- Prone horizontal abduction on stability ball (if patient is able to perform)
- Prone row into ER on stability ball (if patient is able to perform)
- Prone rows prone on table
- Prone extensions (prone on table)
- Biceps/Triceps
- Lower trapezius (LT) strengthening
 - Robbery exercise
 - Table press down
 - Sidelying manual resistance for LT

Improve Neuromuscular Control of Shoulder Complex

- Rhythmic stabilization drills at inner, mid, and near end 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 (if patient can perform without pain or dysfunction)
 - Manual resistance
 - External rotation
 - ER: Begin in supine position progress to sidelying
 - Prone rows
 - ER/IR tubing with rhythmic stabilization
 - Weight bearing exercises:
 - Ball on wall stabilization drills with RS scapular plane
 - Wall slides for serratus anterior
 - Initiate hip & core strengthening & stabilization drills

Continue Use of Modalities (as needed)

- Ice, Laser etc

III. PHASE III – ADVANCED REHABILITATION PHASE

- Goals:**
- Enhance dynamic stabilization
 - Restore functional activities (symptom free)

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

Progress Isotonic Strengthening Program (PRE's)

- Fundamental shoulder exercises II
- Emphasize the following muscles or muscle groups:
 - Rotator cuff (especially ER)
 - Scapular muscles (especially LT,MT, Rhomboids & Serratus Anterior)

Continue Dynamic Stabilization Drills

- ER/IR RS drills
- Scapular NM control drills
- Initiate Prone plank on elbows & knee

Program Scapular Neuromuscular Control Training

- Sidelying manual drills
- Progress to RS and movements (quadrant)
- Reactive NM control drills

Emphasize Endurance Training

- Time bouts of exercise 30-60 sec
- Increase number of reps
- Multiple exercise bouts during day

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/work

Criteria to Progress to Phase IV:

Full non-painful ROM
No pain or tenderness
Satisfactory isokinetic test (if appropriate)
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