

General Rehabilitation Guidelines

Nonoperative Program for Multidirectional Instability or Multidirectional Hyperlaxity with Unidirectional or Bidirectional Instability

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Precautions:

- *Basis*
 - Many patients will have a component of impingement due to improper scapular mechanics and cuff weakness resulting in poor humeral depression
 - All patients will have some degree of scapular dyskinesia
- *Precautions*
 - Assess patients for impingement type symptoms and scapular dyskinesia.
 - If impingement present then exercises must start in pain free range and progress toward increasing scaption as time progresses
 - Cannot progress through stages until scapula is stable on chest wall

General Principles and Guidelines

- **ROM:** passive → active assisted → active
 - Restore normal proprioception and movement patterns (especially scapulothoracic)
- **Strengthening**
 - 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**

Outpatient Phase 1: (Weeks 1 - 6)

- **ROM**
 - Joint mobilization of, AC joint, and scapulothoracic junction
 - Correct any capsular asymmetry through PROM and AROM
 - Posture
 - Correct postural abnormalities and scapular position through muscle reeducation including lumbopelvic and scapulothoracic stability
 - Include anterior chest wall stretching
 - Isometric scapular retraction and depression
 - Trunk extension/scapular retraction
 - Emphasize lower trapezius activation (elbow in back pocket)
 - Upper quarter pivots
- **Strength**
 - Cuff
 - Begin with closed-chain static and short arc isometrics in pain free range including flexion, abduction, extension, ER and IR

- Facilitate muscular co-contraction to improve dynamic joint stabilization
 - Progress to isotonic cuff strengthening through wider range of motion
 - Rubber tubing for sidelying internal rotation, sidelying external rotation, prone posterior deltoid, internal rotation and external rotation at 90° abduction, biceps, and triceps
 - Supraspinatus program: flexion, scaption in IR, prone horizontal abduction and press-ups
 - Scapula
 - Isometric and eccentric scapular stabilization
 - Rubber tubing for shrugs, retraction, depression, D2 flexion, D2 extension, prone and seated rows, chair press-ups, supine serratus anterior, lat pull downs, push-ups with a plus
 - Scapular clocks with hand stabilized on wall at 90° (elevation, depression, protraction, retraction)
 - Closed chain axial load (ball rolls on table top) to emphasize scapular positioning
 - As healing progresses and ROM returns may progress to wall wash
 - Core
 - Core body strengthening exercises to emphasize lumbopelvic and thoracolumbar stability
- **Other**
 - Decrease pain and inflammation and muscles guarding
 - Teach icing techniques
 - Other modalities
- Home exercise program

Functional Phase: (Weeks 7 - 12)

- **Strength**
 - Improve strength, power and dynamic stability
 - Advance concentric and stress eccentric cuff strengthening per upper extremity strengthening program
 - **Muscle Ratios**
 - ER/IR: 65-70%
 - ER/Deltoid: 65-70%
 - Scapular retractor/protractor: 100%
 - Advance eccentric and concentric scapular stabilization
 - Reverse corner pushups, wall angels
 - Lat pull downs with free weights,
 - Push-up plus
 - Scapular punches with various weights and positions
 - Shoulder dumps and diagonal punches with light hand weights
 - Dynamic strengthening at 90-90 position for external and internal rotation
 - Core based muscle synergy
 - Progress PNF patterns
 - Start upper extremity plyometric program
- **Endurance**
 - Begin upper body ergometers beginning at low resistance and height below 90° and slowly progress to height at 140° flexion

Return to Activity: (Weeks 13 -)

- Develop sport or work specific ROM
- Plyometric, neuromuscular control and dynamic stabilization drills
- 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.
- Sport or work specific kinematics and exercises
- Sport or work specific drills for quickness and agility, endurance and power
- Return to play

Common Shoulder Exercises for Instability

* = Key exercises Description	Acute Phase	Early Recovery	Late Recovery	Functional Phase
	Weeks 1-4	Weeks 4-8	Weeks 8-12	> 12 weeks
* Grip Strengthening	●			
* Shoulder clocks	●			
* Codman's	●			
* Self-assisted scaption to 90 or 120°	●			
* Self-assisted ER to neutral or 20°	●			
* Scapular Squeezes/postural correction	●	●	●	●
* Isometrics: SF, SAB, SER, SE, EE, EF	●			
* Active Elbow Flexion/Extension	●	●		
Pulleys for ROM: Flex & Abd		●	●	prn
Wall walks for ROM		●	●	prn
Wand ex for ER ROM		●	●	prn
Towel stretch for IR		●	●	prn
* Side lying IR abduction stretch		●	●	prn
Cross body adduction stretch		●	●	prn
UBE for ROM		●	●	
Ball rolls for scapular control		●	●	
* Tubing: SER, SIR, SF, SE, SAB, Supra		●	●	●
* rowing with tubing		●	●	●
* lat pull downs with tubing		●	●	●
* Progressive ER stretch in abduction			●	●
prone shoulder flexion			●	●
prone shoulder extension			●	●
prone shoulder retraction			●	●
* reverse corner pushups			●	●
* push-ups with plus			●	●
wall angles			●	●
Plyo ball toss and catch			●	●
Lat pull downs with weights			●	●
* Scapular punches with light weight			●	●
* Shoulder diagonal punches and dumps			●	●
UBE for strength and endurance			●	●
Throwing program				●
Sport or work specific drills				●
Strength and endurance training				●