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Banner New River Trails
Sun City West Medical Center
Thunderbird Medical Center

Multidirectional Instability: Nonoperative Protocol

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

- 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
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

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)

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

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- 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

Core

- Core body strengthening exercises to emphasize lumbopelvic and thoracolumbar stability

Other

- Decrease pain and inflammation and muscles guarding
- Teach icing techniques
- 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 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°/second X 30 second bout with 30 second rest, 300°/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