MAYO CLINIC | Orthopedics and Sports Medicine

Mayo Clinic in Florida
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Non-Operative Periscapular Physical Therapy Protocol

Prescription

- PT / OT 2 times per week x 18 weeks, with 2 refill as needed
- Ordering physician – Erick Marigi, MD (NPI: 1801393509)

Points of Emphasis

1. Goal of the protocol is to correct scapular positioning, strengthen scapular stabilizers, and improve overall shoulder mechanics.
2. Additionally, must coordinate proper scapular motion with complementary trunk and hip movements.
3. Function, rather than time, determines a patient's progress through this protocol. However, we have placed some loose guidelines on timing.

Week 0 - 2: Acute Phase

- Identify specific patterns of dyskinesia and address any pain or inflammation
- Perform a thorough evaluation of shoulder and scapular movement, strength, and posture.
- Figure Eight Brace or TLSO brace to assist with posture and exercises
    - Emphasize proper posture, especially during prolonged sitting or standing, to reduce scapular protraction and downward rotation
- Begin soft-tissue mobilization and assisted stretching if muscular inflexibility is limiting motion
    - Passive, Active, Active-Assisted and proprioceptive neuromuscular facilitation stretching techniques
        - Pectoralis minor, Levator scapulae
        - Upper trapezius, Latissimus dorsi
        - Infraspinatus, Teres Minor, Supraspinatus, Subscapularis
- Begin closed kinetic chain exercises at low levels of abduction and external rotation and progress to 90 degrees abduction as tolerated.
    - Upper extremity weight shifting
    - Wobble board exercises
    - Scapular clock exercises
    - Rhythmic ball stabilization
    - Weight bearing isometric extension
- Initiate scapular motion exercises without arm elevation
    - Use trunk flexion and trunk medial rotation to facilitate scapular protraction
    - Use trunk extension, lateral trunk rotation, and hip extension to facilitate scapular retraction.
- Include arm motion with scapular motion exercises as the scapular motion improves.
    - Initially keep arm close to body to minimize intrinsic load
    - Start with "low row" trunk/hip extension, scapular retraction, and arm extension

This protocol is not meant to be prescriptive but a recommendation to guide the rehabilitation process. Each patient's progress may vary based on specifics of their injury and procedure.

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Week 2 - 6: Re-Training Phase

- Figure Eight Brace or TLSO brace to assist with posture and exercises
    - Emphasize proper posture, especially during prolonged sitting or standing, to reduce scapular protraction and downward rotation
- Stretching as below and focus on any tight muscles that may be contributing to abnormal scapular motion examples pectoralis minor, upper trapezius, and levator scapulae.
    - Butterfly, Chin Tuck, Cross Body, ER, Sleeper stretch, Standing Corner, Supine Thoracic Extension
- Re-Training
    - Scapula Wall and Retraction Exercises, Shoulder Flexion Exercise, Wall Washes
- Begin kinetic chain cable exercises using hip and trunk extension with scapular retraction as well as hip and trunk flexion with scapular protraction
    - Vary angles of pull and planes of motion to reproduce appropriate scapular functions

Week 6 - 12: Early Functional Recovery Phase

- Figure Eight Brace or TLSO brace to assist with posture and exercises
- Stretching – Butterfly, Sleeper, Standing Corner, Supine Thoracic Extension
- Re-Training – Scapula Wall / Retraction, Shoulder Flexion, Wall Washes
- Strengthening
    - With Weights: Butterfly, Supine Flexion, Wall Washes
    - With Weights: Forward and Lateral Lunges, Lawnmower Pulls
    - Weights or Resistance: Posterior Tilting
- Progression
    - Begin with isometric holds to strengthen the serratus anterior, lower trapezius, and rhomboids without causing unnecessary scapular movement.
    - Gradually progress to dynamic exercises such as wall push-ups, scapular squeezes, prone Ys, Ts, and Ws, focusing on maintaining proper scapular alignment and movement
    - Integrate closed-chain exercises like plank variations to engage the scapular stabilizers in a functional manner
- Continue kinetic chain cable exercises using hip and trunk extension with scapular retraction as well as hip and trunk flexion with scapular protraction
    - Vary angles of pull and planes of motion to reproduce appropriate scapular functions
- Start lunges with dumbbell reaches to emphasize kinetic chain timing and coordination.
    - Vary level of arm elevation and degree of elbow flexion in the standing or return position to increase functional demand on the scapular muscles.
        - (AVOID SCAPULAR COMPENSATIONS SUCH AS WINGING OR SHRUGGING)

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Week 12 – 18+: Functional and Early Strength Recovery Phase

- Continue Phase 2 Exercises that are helping, especially strengthening exercises
- Progressive Resistance Training
    - Incorporate exercises that increase resistance and complexity, such as push-ups, rows, and overhead presses, ensuring correct scapular motion throughout.
- Proprioceptive and Neuromuscular Training:
    - Enhance proprioception and coordination with exercises that challenge the shoulder complex in various positions and movements.
        - Medicine Ball toss and Catch, Tubing Plyometrics
- Sport-Specific Drills
    - For athletes, include drills that mimic the demands of their sport, focusing on maintaining proper scapular control.
- Return to sport / activity
    - Light training, gradually increasing over 4 - 6 weeks
        - Use Figure of Eight Brace when initially returning to sport
    - Full Activity / Sport at least 4 - 6 weeks after initial return to light activities
- Return to full shoulder strengthening programs (weights, etc.)

Throughout All Phases

- Education:
    - Teach the individual about the role of the scapula in shoulder function and the importance of maintaining proper scapular alignment.
- Manual Therapy:
    - As appropriate, include manual therapy techniques (e.g., soft tissue mobilization, joint mobilizations) to address any restrictions that may be contributing to dyskinesia.
- Reassessment:
    - Regularly assess scapular movement and shoulder function to monitor progress and adjust the treatment plan as necessary.
- Monitoring and Adjustment
    - Continuous evaluation of pain, scapular movement, shoulder function, and progression towards individual goals is essential to tailor the protocol effectively.