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**COMPREHENSIVE ADULT SPINE, ADULT TOTAL HIP AND KNEE RECONSTRUCTION, AND
ORTHOPAEDIC TRAUMATOLOGY/FRACTURE MANAGEMENT**

Patient Name: _____

Diagnosis: _____

Cervical Foraminal Stenosis Physical Therapy Prescription

Therapy

Usually two times a week. Duration should be as long as needed to reach functional goals and/or independent with home exercise programs and progressions.

Permanent Restrictions

Avoid aggressive end range cervical extension.

Treatment options below do not all have to be included, but all could be appropriate for this patient population. Use tests/measures and clinical decision making to individualize the appropriate treatment(s) to your patient. If radicular symptoms are present, address these first and make sure to give long term home exercise program for stabilization.

Phase I

Precautions

- Keep spine in neutral position for all strengthening and achieve proper neuromuscular control of cervical retraction and scapular retraction before progressing strengthening exercises.

Goals

- Achieve proper muscle firing with cervical retraction and scapular retraction 10 each
- Able to sit with good posture without verbal cueing with neutral head position
- Improve cardio endurance to at least 20 minutes, three to five days a week
- Determine patient's directional preference, if present (extension, flexion, side-bend or rotation)
- Centralize symptoms out of upper extremity (if present), then work to abolish if
- **Do not** progress strength exercises until symptoms are centralized
- Address any soft tissue restrictions from compensatory patterns and/or muscle guarding

Education

- Teach importance of sitting posture with use of lumbar roll

- Teach correct body mechanics (example: lifting, vacuuming, yard work, etc.)
- Teach how different postures and positions of the head and neck effect their condition
- Discuss sleeping postures and pillow position if needed

Stabilization Exercises (emphasis on achieving proper neuromuscular control)

- **Cervical Retraction:** 10” holds in multiple positions (supine, seated, prone on elbows, quadruped, etc.)
- **Scapular Retraction:** 10” isometrics with emphasis on neuromuscular control and posture (eliminate shrug)

Manual Therapy (OMPT/Chiropractic Manual Therapy)

- Sound assisted soft tissue mobilization/augmented soft tissue mobilization as needed for areas of soft tissue restriction or muscle guarding
- Address any positional faults with mobilization or contract/relax techniques
- Manual traction and suboccipital release as needed
- Joint mobilizations as needed

Directional Preference Exercises (repeated or static movements)

- If worse with flexion activities (sitting, computer work, etc.), attempt cervical retraction exercises first and minimize flexion, maintain good posture with scapular retraction for all strengthening.
- If worse with extension activities, attempt flexion or flexion/rotation away from pain exercises and neutral spine stabilization (**rarely the case**).
- If worse with both flexion and extension, work on exercises with a neutral spine and avoid end ranges until symptoms calm down

Flexibility

- Pecs, upper trap, levator scapulae, scalenes when not conflicting with directional Preferences above

Cardio (as long as it doesn’t produce or increase symptoms, let pain be the guide)

- Stationary bike, walking, arm bike (upper body exercise)

Mechanical Traction

- When appropriate (example: symptoms are improved after manual traction)

Phase II

Goals

- Patient able to perform proper cervical retraction and scapular retraction with day to day activities
- Initiate deep cervical flexion training – isometrics
- Restore normal cervical active range of motion without symptom production
- Continue to improve cardio endurance to at least 20 minutes, three to five days a week
- Address any remaining soft tissue restrictions from compensatory patterns and/or muscle guarding
- Progress postural strengthening and cervical stability

Stabilization/Strengthening Exercises

Only initiate these once patient can complete Phase I exercises. Emphasize neutral spine position during each exercise and correct muscle activation patterns. (This is **not** a complete list.)

- **Scapular Retraction:** 10" isometrics with normal in multiple positions (seated, prone, side lying, standing)
- **Deep Cervical Flexion:** 10" isometric upper cervical flexion (slight retraction with head nod)
- **Prone:** Shoulder extensions, mid trap and low trap, bilateral and unilateral (without compensation through upper trap and levator scapulae)
- **Theraband:** Bilateral/unilateral row, bilateral/unilateral extension, bilateral unilateral external rotation
- **General Rotator Cuff Strengthening:** As needed
- **Stability Ball:** Prone and row, extension, mid trap, low trap, teres
- Address any myotomal weaknesses

Flexibility (see above)

Manual Therapy

- Address any remaining soft tissue restriction/joint restrictions as stated above

Cardio (as long as it doesn't produce or increase symptoms, let pain be the guide)

- Stationary bike, walking, arm bike (upper body exercise), elliptical

Phase III

Only initiate these once patient can complete Phase II exercises correctly and without increase in pain.

Advanced Strengthening

- Can initiate combined strengthening/whole body strengthening to tolerance as long as maintaining proper body mechanics with program.

Cardio (as long as it doesn't produce or increase symptoms, let pain be the guide)

- Stationary bike, walking, arm bike (upper body exercise), elliptical

Return to Sport (must be cleared by Dr. Anderson first)

- Gradual progressive return to sports following parameters outlined by the physician.
- **Goal:** Reaching full participation over a month, as long as there is no recurrence of pain. Do **not** start full practices or games right away.
- **Guideline:** Increase participation about 20 to 25 percent per week, avoiding participation on consecutive days for the first two weeks. For example:
 - **Week 1:** 20 to 30 minutes of participation every other day
 - **Week 2:** 30 to 60 minutes of participation every other day
 - **Week 3:** 30 to 60 minutes of participation up to five days per week
 - **Week 4:** 60 to 120 minutes of participation up to five days per week