Cervical Spondylosis: A Physical Therapy Management Approach

Cervical spondylosis is a common degenerative condition of the cervical spine, affecting over 85% of individuals over 60 years old. Physical therapy is the primary conservative treatment, significantly reducing the need for surgery by 60%. The annual cost of neck pain in the U.S. exceeds $88 billion.

Understanding Cervical Spondylosis

Etiology

Age-related disc degeneration, osteophyte formation, and facet hypertrophy are key factors.

Common Symptoms

Neck pain (90% of cases), stiffness, and radiculopathy (25% of cases) are frequently observed.

Pathophysiology

Leads to spinal canal and foraminal narrowing, compressing nerves.

Progression

Typically gradual onset, often resulting in chronic pain lasting more than 12 weeks.

Goals of Physical Therapy Management

1 Pain Reduction

Achieve a >50% decrease in Neck Pain Rating Scale (NPRS) score.

2 Restore Cervical Range of Motion

Increase flexion and extension by 15-20 degrees for improved mobility.

3 Improve Functional Capacity

Enhance Neck Disability Index (NDI) score by >15 points, improving daily activities.

4 Neurological Symptom Resolution

Decrease radicular symptoms by 70%, alleviating nerve compression signs.

5 Prevent Recurrence

Empower patients with self-management techniques and ergonomic training.

Initial Assessment & Acute Phase Modalities

Initial Assessment

- Comprehensive evaluation of posture, range of motion, and neurological function.
- Detailed palpation to identify areas of tenderness and muscle guarding.

Acute Phase Modalities

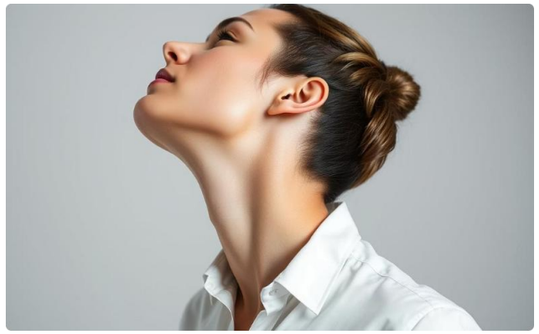
Heat/Cold: Reduces muscle spasm and inflammation.

TENS: Provides segmental pain modulation (e.g., 80-120 Hz).

Cervical Collar: Short-term use (max 7 days) for acute instability.

Manual Therapy: Gentle Grade I-II mobilizations for immediate pain relief.

Therapeutic Exercise Program

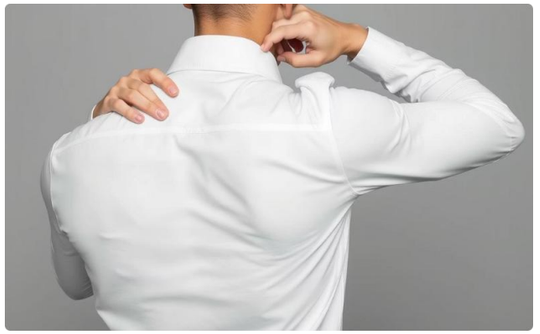


Strengthening

Deep neck flexor exercises, such as craniocervical flexion using a blood pressure cuff, targeting 22-30 mmHg.

Stretching

Specific stretches for upper trapezius and levator scapulae muscles (30-second hold, 3 repetitions each).



Postural Exercises

Focus on scapular retraction and chin tucks (10-15 repetitions, 2-3 sets) to improve alignment.

Proprioception

Gaze stability exercises and head movements with a laser pointer to enhance neck awareness.

Education & Ergonomic Modifications

Patient education is crucial for long-term management of cervical spondylosis. Understanding and implementing ergonomic principles can significantly reduce symptoms and prevent recurrence.

Ergonomic Workstation Setup

- Monitor positioned at eye level to reduce neck strain.
- Chair with adequate lumbar support and armrests.
- Take breaks every 30-60 minutes from static postures.

Lifestyle Adjustments

- Maintain a neutral spine and "stack" head over shoulders.
- Use a supportive pillow (e.g., cervical roll) for sleep hygiene.
- Pacing activities and avoiding aggravating movements are key for self-management.

Advanced Techniques & Adjunctive Therapies




Manual Therapy

Specific joint glides (Grades III-IV) and high-velocity low-amplitude thrusts for segmental hypomobility.

Cervical Traction

Intermittent mechanical traction (10-20 lbs, 15-20 min) to decompress the cervical spine.

Dry Needling

Targets myofascial trigger points in muscles like SCM, trapezius, and suboccipitals.

Soft Tissue Mobilization

Addresses muscle guarding and fascial restrictions for improved tissue extensibility.

Conclusion & Long-Term Management

Physical therapy is highly effective in managing cervical spondylosis, improving pain, range of motion, and functional capacity. Sustained relief depends on patient adherence and proactive strategies.

Adherence to Home Exercise Program (HEP)

Crucial for maintaining improvements and preventing symptom recurrence.

Lifestyle Modifications

Regular exercise, ergonomic awareness, and stress management are vital for long-term health.

Proactive Follow-Ups

Periodic PT visits every 3-6 months as needed ensure continued optimal patient outcomes and adjustments to care.