

CERVICAL SPINE

Neck Pain With Movement Coordination Impairments (Whiplash Associated Disorder-WAD, hypermobility)

Acute: Injury – Two weeks
Initial Evaluation
<ul style="list-style-type: none">➤ Diagnostics following guidelines of Canadian cervical spine rules➤ History: Posture at time of impact? Acceleration vs deceleration?➤ Pain: Local vs radicular?➤ Posture: Ability to maintain neutral spine?➤ AROM: Flexion or extension biased?➤ Neurological: Myotomes, dermatomes, DTR's?➤ Prior level of function?➤ Precautions: Sharp Purser Test, Transverse Ligament Test, Alar ligament Test, lateral shear test.➤ Considerations: BPPV, concussion, new onset HA's.
Patient Education
<ul style="list-style-type: none">➤ Recommendations for posture for sleep, work and home that encourages normal cervical lordosis.➤ Encourage patient to begin to resume non-provocative, pre-accident activity as soon as possible.➤ Minimize collar use.
Therapeutic Exercise
<ul style="list-style-type: none">➤ Instruct through active mobilization exercise promoting mobility of the neck through small range and amplitude exercise within the patients comfort level.➤ Postural instruction to include peri-scapular stabilization.
Manual Techniques
<ul style="list-style-type: none">➤ Manual techniques of the cervical and thoracic spine and will dependent on therapist clinical reasoning.
Modalities
<ul style="list-style-type: none">➤ Modalities as indicated.
Goals
<ul style="list-style-type: none">➤ Independent with proper posture and ergonomic positioning for daily activities.➤ Initiation of early gentle mobilization to decrease stiffness and fear avoidance.

Subacute: 2-12 Weeks
Patient Education
<ul style="list-style-type: none">➤ Progress with lifting techniques and work simulation as patient is ready, usually at 2-3 mos.➤ Encourage walking program or other cardiovascular endurance
Therapeutic Exercise
<ul style="list-style-type: none">➤ Exercise should be individualized and graded with consideration for postural control, specific motor and sensorimotor retraining and endurance.➤ Active cervical ROM and isometric low-load strengthening.
Manual Therapy
<ul style="list-style-type: none">➤ Joint mobilization to cervical and thoracic spine to address hypomobility and irritability.➤ Suboccipital release and other soft tissue mobilization.
Modalities
<ul style="list-style-type: none">➤ Modalities as indicated including: ice, heat, TENS.
Goals
<ul style="list-style-type: none">➤ Restore normal postural with prolonged positions.➤ Minimal to no pain.

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- Return to work and home activity.

Chronic: Longer than 12 weeks

Evaluation Considerations

- Assess for pain and psychological overlay assessment.
- Assess for functional and postural adaptations to pain.
- Assess for flexibility in shoulder girdle and anterior chest wall.
- Assess for ADL and work tolerance/compensations for inactivity.

Patient Education

- Postural unloading with emphasis on normal cervical lordosis.
- Education regarding ergonomics for work, home and sleep positions.
- Education regarding the nature and course of WAD and the patient's involvement in self-management of symptoms.

Therapeutic Exercise

- Exercise should be individualized and graded with consideration for postural control, specific motor and sensorimotor retraining and endurance.
- Low load cervicospulothoracic strengthening, endurance and flexibility.
- Functional training using cognitive behavioral therapy principles.
- Vestibular rehabilitation.
- Eye-head-neck coordination and neuromuscular coordination elements.

Manual Therapy

- Soft tissue mobilization to address areas of muscle guarding and soft tissue reactivity.
- Joint mobilization to the cervical and thoracic spine to address areas of hypomobility.

Modalities

- Modalities as indicated but limit palliative treatment in this population (2-3 weeks).
- TENS

Goals

- Independent with home exercise program.
- Independent pain management.
- Independent with return to work and functional mobility goals.

References

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4. Wiangkham, T. et al., The effectiveness of Conservative Management for Acute Whiplash Associated Disorder (WAD) II: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Pain Research & Management: The Journal of the Canadian Pain Society*, 2015; 10.
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