Canadian Chiropractic Guideline Initiative

ADVANCING EXCELLENCE IN CHIROPRACTIC CARE

Educational Executive Summary of Recommendations for Neck Pain Associated and Whiplash Associated Disorders for Practitioners

Neck pain and its associated disorders (NAD) are common and result in significant social, psychological, and economic burden. [1] In light of recent research evidence [2–6], an update to the recommendations of the management of Neck Pain Associated Disorders and Whiplash-Associated Disorders (WAD) was timely. The Guideline Development Group of the Canadian Chiropractic Guideline Initiative (CCGI) considered recently published systematic reviews on NAD and WAD from the Ontario Protocol for Traffic Injury Management (OPTIMa) Collaboration. [7]

This educational executive summary provides an overview of recommendations for clinical practice issued by CCGI in a new clinical practice guideline on the management of NAD and WAD. The full guideline and accompanying documents are available from the CCGI website at **www.chiroguidelines.org**.

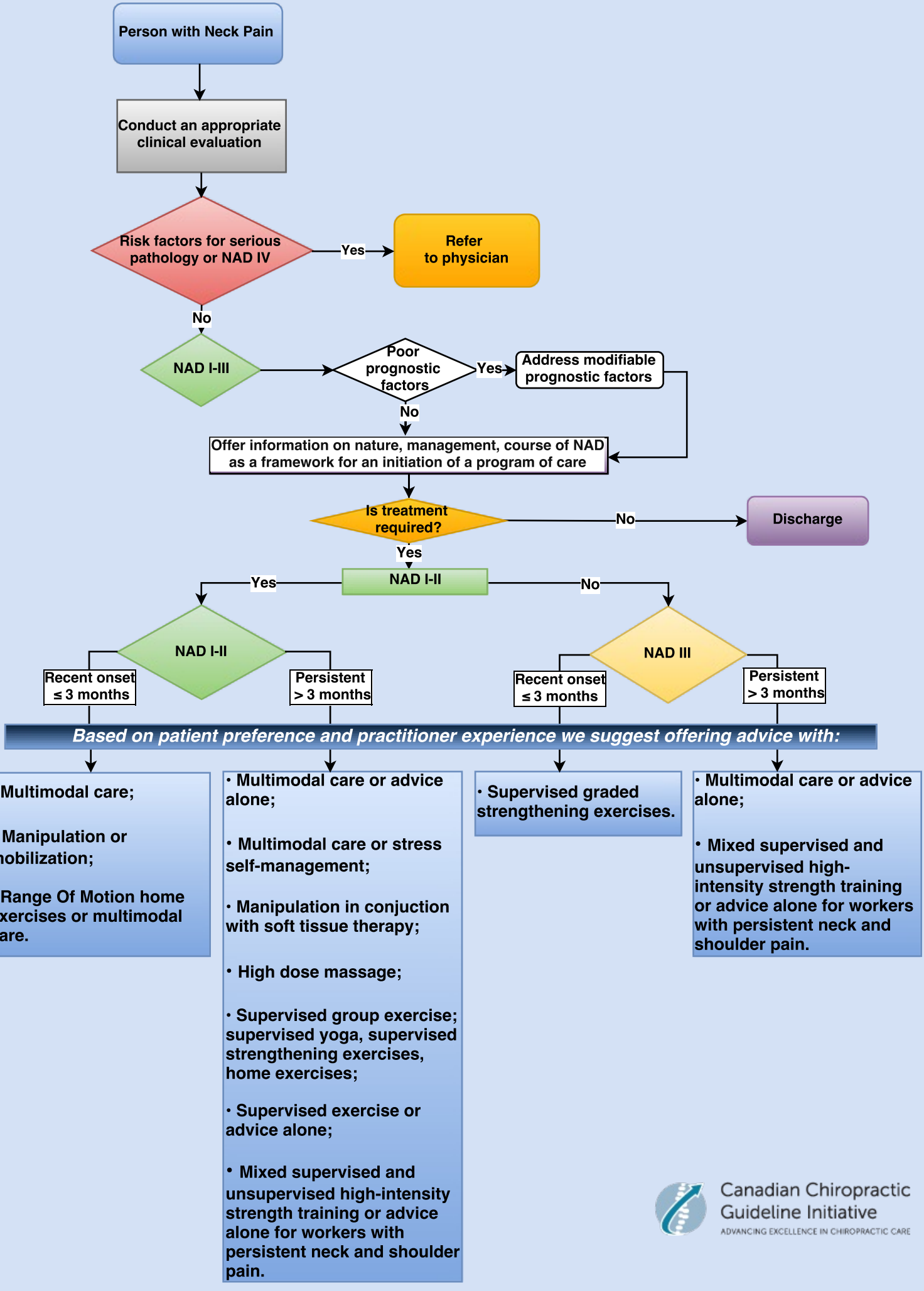
Summary of recommendations: A multimodal approach including manual therapy, self-management advice and exercise is an effective treatment strategy for both recent onset and persistent neck pain and whiplash associated disorders.

Classification of Neck Pain Associated Disorders (NAD) [8] and Whiplash Associated Disorders (WAD) [9]

Grade	Definition
The 2000–2010 Bone and Joint Decade Task Force on Neck Pain and Its Associated Disorders Classification of NAD [8]	
I	No signs or symptoms suggestive of major structural pathology and no or minor interference with activities of daily living
II	No signs or symptoms of major structural pathology, but major interference with activities of daily living
III	No signs or symptoms of major structural pathology, but presence of neurologic signs such as decreased deep tendon reflexes, weakness or sensory deficits
IV	Signs or symptoms of major structural pathology
The Quebec Task Force Classification of WAD [9]	
I	Neck pain and associated symptoms in the absence of objective physical signs
II	Neck pain and associated symptoms in the presence of objective physical signs and without evidence of neurological involvement
III	Neck pain and associated symptoms with evidence of neurological involvement including decreased or absent reflexes, decreased or limited sensation, or muscular weakness
IV	Neck pain and associated symptoms with evidence of fracture or dislocation

Côté P, Wong JJ, Sutton D, Shearer HM, Mior S, Randhawa, K al. Management of neck pain and associated disorders: A clinical practice guideline from the Ontario Protocol for Traffic Injury Management (OPTIMa) Collaboration. Eur Spine J 2016 doi:10.1007/s00586-016-4467-7

Algorithm for Neck Pain Associated Disorders (grades I-III)



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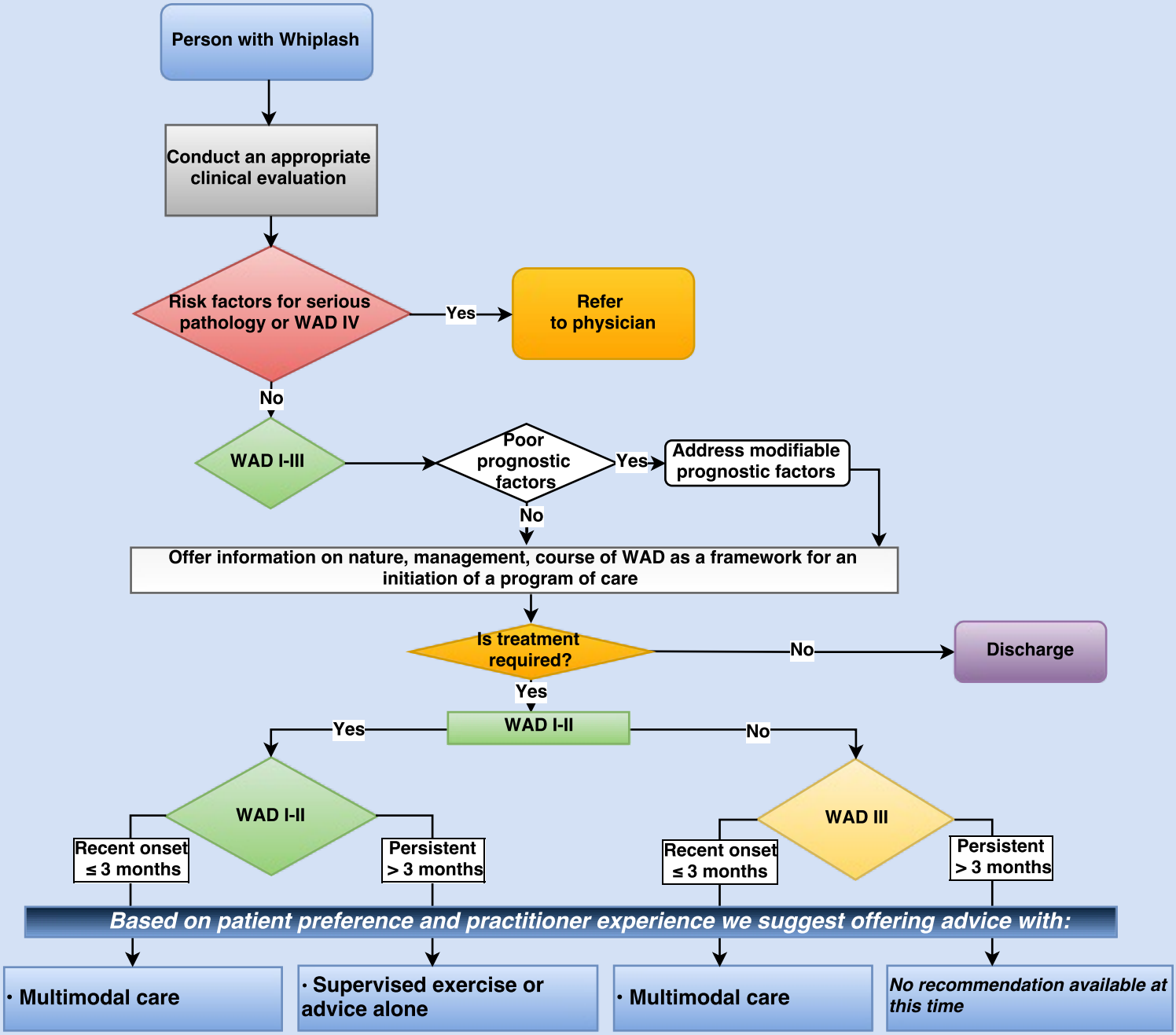
Algorithm for Whiplash Associated Disorders (grades I-III)



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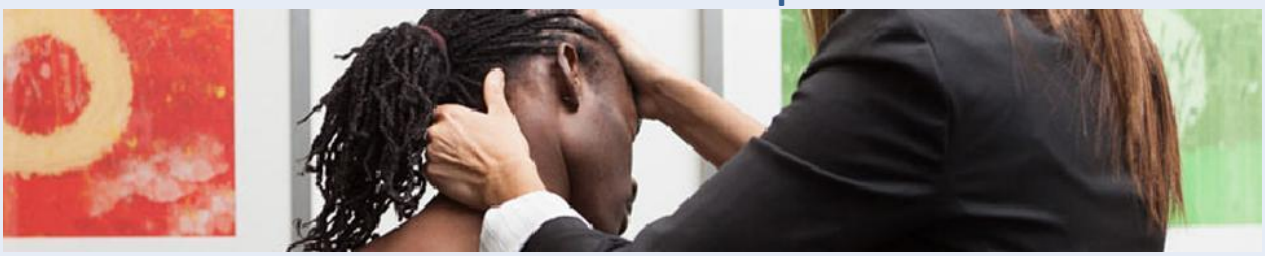
Recommendations for Neck Pain and Whiplash Associated Disorders



SUMMARY OF RECOMMENDATIONS FOR GRADES I-II NECK PAIN ASSOCIATED DISORDERS (NAD)

- ***For recent-onset (0-3 months) neck pain grades I-II,*** *based on patient preference and practitioner experience we suggest offering advice with:*
  - **multimodal care;**
  - **manipulation or mobilization;**
  - **Range of motion home exercises or multimodal care.**
- ***For recent-onset (0-3 months) neck pain grade III,*** *based on patient preference and practitioner experience we suggest offering advice with:*
  - **supervised graded strengthening exercises.**
- ***For persistent (> 3 months) neck pain grades I-II****, based on patient preference and practitioner experience we suggest offering advice with:*
  - **multimodal care or stress self-management;**
  - **multimodal care or advice alone;**
  - **manipulation in conjunction with soft tissue therapy;**
  - **supervised yoga; supervised group exercise; supervised strengthening exercises or home exercises;**
  - **mixed supervised and unsupervised high-intensity strength training or advice alone for workers with persistent neck and shoulder pain;**
  - **high dose massage.**
- ***For persistent (> 3 months) neck pain grade III****, based on patient preference and practitioner experience we suggest offering advice with:*
  - **multimodal care or advice alone;**
  - **mixed supervised and unsupervised high-intensity strength training or advice alone for workers with persistent neck and shoulder pain.**

SUMMARY OF RECOMMENDATIONS FOR GRADE I-III WHIPLASH ASSOCIATED DISORDERS (WAD)

- ***For recent onset (0-3 months) whiplash grades I-III,*** *based on patient preference and practitioner experience we suggest offering advice with:*
  - **multimodal care.**
- ***For persistent (> 3 months) whiplash grades I-II****, based on patient preference and practitioner experience we suggest offering advice with:*
  - **supervised exercise or advice alone.**

Detailed Recommendations

Recommendations for Recent-Onset Neck Pain Associated Disorders (NAD)

- **For patients with recent (0-3 months) neck pain and associated disorders grades I-II, we suggest manipulation or mobilization based on patient preference.**
- **For patients with recent (0-3 months) neck pain grades I-II, we suggest ROM home exercises or multimodal care for reduction in pain and disability.**

  Remark: *Home exercises include education, self-care advice, exercises and instruction of activity of daily living. Multimodal care includes manipulation and mobilization with limited light soft-tissue massage, assisted stretching, hot and cold packs, and advice to stay active or modify activity as needed. Medication including non-steroidal anti-inflammatory drugs (NSAIDs), acetaminophen and muscle relaxants is an alternative. However, medication is associated with a higher risk for adverse events.*
- **For patients with recent (0-3 months) grade III neck and arm pain, we suggest supervised graded strengthening exercises* rather than advice alone**.**

  Remark: **Supervised graded strengthening exercises consisted of strengthening and stability exercises twice a week for 6 weeks with daily home exercises (which included mobility, stability and muscle strengthening). **Advice consisted of maintaining activity of normal life without specific treatment.*

Recommendations for Persistent Neck Pain Associated Disorders (NAD)

- **For adult patients with persistent (over 6 months duration) neck pain grades I-II, we suggest supervised group exercise* to reduce neck pain and disability.**

  Remark: *Patients received 18-24 group sessions during a period of 4 to 6 months. Patients considered had a rating of 40/100 on a pain scale (VAS). The intervention group reached suggested MCID level of 10% difference for pain and functional outcomes. *Exercises included qigong or ROM, flexibility and strengthening exercises. No evidence of significant effect in the elderly population.*
- **For patients with persistent (over 3 months) grades I-II neck pain and disability, we suggest supervised yoga over education and home exercises for short-term improvement in neck pain and disability.**

  Remark: *Baseline intensity of pain was more than 40/100 and at least 3 months duration. Yoga was specific to Iyengar type, with a maximum of 9 sessions over 9 weeks.*
- **For patients with persistent (over 3 months) grades I-II neck pain, we suggest supervised strengthening exercises or home exercises.**

  Remark: *For reduction in pain, supervised strengthening exercises, provided along with ROM exercises and advice, interventions were evaluated at 12 weeks within 20 sessions. Home exercises include stretching or self-mobilization.*
- **For patients with persistent (over 3 months) neck pain and associated disorders grades I-II, we suggest multimodal care* or stress self-management** based on patient preference, prior response to care and resources available.**

  Remark: **Individualized multimodal care may include manual therapy (manipulation, mobilization, massage, traction), acupuncture, heat, transcutaneous electrical nerve stimulation, exercise, and/or ultrasound. **Stress self-management may include relaxation, balance and body awareness exercises, pain and stress self-management lectures and discussion. The multimodal care group received an average of 7 (range 4-8) sessions, compared to 11 (range 1-52) sessions for stress self-management group over 20 weeks.*
- **For patients with persistent (over 3 months) neck pain grades I-II, we suggest manipulation in conjunction with soft tissue therapy.**

  Remark: Evaluated after eight 20 min sessions (over a three week period). Does not include manipulation as a stand-alone treatment.
- **For patients with persistent (over 3 months) neck pain and associated disorders grade I-II, we suggest high-dose massage over wait listing based on patient preferences and resources available.**

  Remark: Interventions were given 3 X 60 min a week over 4 weeks. Lower dosages and duration did not have therapeutic benefit, and we cannot suggest offering as an option.
- **For patients presenting with persistent (over 3 months) neck pain grades I-III, we suggest clinicians offer *multimodal care and/or **practitioner advice based on patient preference.**

  *Remark: * Multimodal care and exercises may consist of thrust/non-thrust joint manipulation; muscle energy, stretching and home exercises (cervical retraction, deep neck flexor strengthening, cervical rotation ROM). ** Multimodal minimal intervention may consist of postural advice; encouragement to maintain neck motion and daily activities; cervical rotation ROM exercise; instructions to continue prescribed medication; therapeutic pulsed (10%) ultrasound at 0.1 W/cm2 for 10 minutes applied to the neck and cervical ROM exercises.*
- **For workers with persistent (over 3 months) neck and shoulder pain, we suggest mixed supervised and unsupervised high-intensity strength training or advice alone.**

  Remark: *For reduction in pain intensity, 3 sessions per week, each lasting 20 minutes over a 20-week period. Exercise includes strengthening. Extra resources are likely required for complete exercise intervention implementation.*

Recommendations for Recent-Onset Whiplash Associated Disorders (WAD)

- **For adult patients with recent (0-3 months) WAD grades I-III, we suggest multimodal care over education alone.**

  Remark: *Multimodal care may consist of manual therapy (joint mobilization), other soft tissue techniques, education and exercises.*

Recommendations for Persistent Whiplash Associated Disorders (WAD)

- **For patients with persistent (over 3 months) grades I-II WAD, we suggest supervised exercises with advice or advice alone based on patient preference and resources available.**

  Remark: *Extra resources may be required for supervised exercises.*

Recommendations proposed in this guideline are derived from the best available evidence for the treatment of Neck Pain Associated and Whiplash Associated Disorders. Clinicians should always aim to incorporate the best evidence available to inform clinical decision making.

About the quality and strength of the evidence for this guideline

Quality of the evidence [10]

The certainty in the evidence (also known as quality of evidence or confidence in the estimates) is assessed for each important outcome using these categories: high, moderate, low. Randomized trials begin as high quality evidence. Quality may be downgraded as a result of limitations in study design or implementation, imprecision of estimates (wide confidence intervals), variability in results, indirectness of evidence, or publication bias. The quality of the evidence of included randomized controlled trials ranged between low and moderate.

Strength of the evidence [11]

Based on available evidence, the quality of the recommendation indicates the extent to which one can be confident that adherence to the recommendation will do more good than harm. Strength of recommendation is determined by the balance between desirable and undesirable consequences of alternative management strategies, quality of evidence, variability in values and preferences, and resource use. Overall, the strength of the evidence of the recommendations for this guideline is weak. Weak recommendations mean that patients' choices will vary according to their values and preferences, and clinicians must ensure that patients' care is in keeping with their values and preferences.

Structured Patient Education

Recommendations for structured patient education are included in the exercise intervention section of this guideline. The panel decided not to repeat these findings in the current section and felt that the benefits of increasing the frequency and intensity of exercise regimes was not restricted to those working in an industrial environment, or to any specific population sub-group with the exception of older adults.

Work Disability Prevention Interventions

Evidence on Work Disability Prevention interventions was considered, but the panel decided not to provide practice recommendations because of the uncertainty surrounding judgments on the evidence.

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