



## **The Bone and Joint Decade Task Force On Neck Pain and Its Associated Disorders**

### **Summary of Key Findings January 2008**

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#### **Background**

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The Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders is composed of a group of international researchers and scientist-clinicians who have spent the past seven years undertaking a comprehensive and structured review of the current research on neck pain. The Scientific Secretariat of the Task Force is composed of 13 members and has been supported by an international Advisory Committee of 17 members. The Task Force and Advisory Committee members represent 14 disciplines ranging from neurology and rheumatology to epidemiology, chiropractic and physical therapy from across nine countries.

In conducting its review of the available published research on neck pain, the Neck Pain Task Force considered almost 32,000 research citations and performed critical appraisals of the more than 1,000 research studies that were relevant to its mandate. The Task Force report synthesizes the best available evidence on the onset, course and prognosis, assessment and management of neck pain, and includes the results of several original research studies.

## Universal Findings

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**1. Neck pain is a widespread experience:**

- Most sufferers manage to carry on with their usual activities.
- About 1 or 2 people in 20 will find their pain disabling.

**2. Once an episode of neck pain happens, the majority will find it is a persistent or recurrent condition.**

**3. There is usually no single cause of neck pain:**

- Many factors play a part including overall physical and mental health, work and daily activities; there are usually multiple factors that contribute to an individual's neck pain.
- Most neck pain is not the result of serious injury or disease.
- Diagnostic tests such as X-rays, CT or MRI scans are only required in a minority of cases when a thorough physical examination and patient history indicate further investigation is needed. Routine imaging will not increase understanding of causation.
- Degenerative changes in the neck increase with age and are common in people with and without neck pain; degenerative changes seen on X-rays are not predictive of neck pain.

**4. Neck pain including WAD should be classified into a common system and the Neck Pain Task Force recommends 4 Grades:**

- Grade 1: neck pain with little or no interference with daily activities.
- Grade 2: neck pain that limits daily activities.
- Grade 3: neck pain accompanied by radiculopathy ("pinched nerve" - pain weakness and/or numbness in the arm).
- Grade 4: neck pain with serious pathology, such as tumor, fracture, infection, systemic disease; it was beyond the mandate of the task force to study Grade 4 neck pain.

**5. Most neck pain is Grade 1 or 2: there are a variety of treatments worth considering:**

- Education
- Exercise
- Mobilization
- Manipulation
- Acupuncture
- Analgesics
- Massage
- Low level laser therapy

**6. Treatments *unlikely* to help Grades 1 or 2 neck pain:**

- Collars
- Ultrasound, electrical muscle stimulation, Transcutaneous Electrical Nerve Stimulation (TENS)
- Most injection therapies such as corticosteroid injections in cervical facet joints
- Radio frequency neurotomies (overheating of small nerves in the neck to suppress pain)
- Surgery is not indicated in Grades 1 or 2 neck pain

**7. There is no “best” treatment for neck pain that is effective for everyone:**

- Trying a variety of therapies or combination of therapies may be needed to find relief.
- Pain relief is often modest and short-lived.
- Be cautious of treatments that make “big” claims for relief of neck pain.
- Short episodes of care may be helpful: lengthy treatment is not associated with greater improvements.

## **People With Neck Pain**

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**1. People with Grade 1 or 2 neck pain can play an active role in managing their pain:**

- Do not expect to find a single “cause” for your neck pain.
- Stay as active as you can.
- You may choose to self-manage your pain; for example, stay active, exercise, reduce mental stress, try over-the-counter pain relievers.
- If you think you need treatment, talk to your health care provider about the range of effective treatment options that make sense for you; you may need to try a variety of options.
- Have realistic expectations for relief – relief is often modest and short-lived.
- Do not continue treatment that doesn’t provide improvement within a reasonable period of time; you should see improvement after 2-4 weeks if the treatment is the right one for you.

**2. There is relatively little research on what does or does not prevent neck pain from occurring in the first place or from recurring;**

- For example, ergonomics, cervical pillows, postural improvements, may or may not help.

## All Health Care Providers

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- 1. Conduct a thorough patient history, physical examination and patient self-assessment questionnaire to identify or rule out Grades 3 or 4 neck pain, e.g. radiculopathy, tumor, fracture, infection, systemic disease.**
- 2. Routine imaging in Grades 1 or 2 neck pain will not increase understanding of causation:**
  - Avoid unnecessary investigations for Grades 1 and 2 neck pain, e.g. X-ray, MRI, CT scan.
  - Degenerative changes seen on X-ray are not predictive of neck pain.
- 3. Treat based on Grades of neck pain:**
  - Provide the patient with an informed choice of effective treatment options:
    - Involve the patient in decision-making/trial of different options – no one treatment works best for everyone.
  - Proceed cautiously with Grade 3 neck pain:
    - There is little research on non-surgical interventions for Grade 3 neck pain.
    - Consider epidural corticosteroid injections for temporary relief of radiculopathy.
    - Consider surgery in the presence of serious pathology or persistent radiculopathy.
  - Whiplash associated disorders (WAD) may fall into any of the 4 Grades of neck pain: assess and treat according to Grade.
  - Grade 4 patients should be treated in accordance with best practices for the diagnosed pathology:
    - It was beyond the mandate of the task force to study Grade 4 neck pain.
- 4. Cervical manipulation is a reasonable option for people with Grade 1 or 2 neck pain:**
  - The risk of vertebrobasilar (VBA) stroke associated with a visit to a chiropractor's office appears to be no different from the risk of stroke following a visit to an MD's office:
    - It is likely that patients in the early stages of VBA stroke are presenting to both chiropractors and family doctors because of neck pain and headache due to pre-existing vertebral artery dissection which is a risk factor for VBA stroke.
    - VBA dissection and stroke is extremely rare and there is no practical way to screen neck pain and headache patients for this problem.

## **Emergency Physicians**

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1. The Canadian Cervical Spine Rule or the National Emergency Xradiography Utilization Study (NEXUS) Low Risk Criteria are extremely effective at identifying patients who do not require imaging.
2. There is no scientifically admissible evidence to support the use of routine MRI as a screening tool.
3. CT scan is more sensitive than X-ray in high-risk patients, e.g. intoxicated, unconscious and/or obtunded.
4. Five view X-rays are no more effective than three views in identifying fractures.

## **Surgeons**

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1. There is no evidence for surgical intervention in Grades 1 or 2 neck pain.
2. For surgery that is meant to take the pressure off a compressed nerve root, there is no evidence that one type of decompression or fusion surgery is superior to other types of decompression and fusion surgeries (e.g. plates, cages, type of graft taken).

## **Public and Private Insurers**

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1. Adopt universal (multi-provider/multi-modality) evidence-based treatment guidelines when paying for services.
2. Create health care provider incentives which reward doing the 'right thing' (e.g. thorough examination and history; effective treatment options, education and monitoring).
3. Recognize the role that compensation policies have on patient outcomes; ensure that insurance policies don't inadvertently promote disability.
4. The risks associated with effective, non-surgical treatments are about the same; all are low risk.

## Summary

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- 1. Neck pain is common and frequently persistent or recurrent.**
- 2. There is typically no single cause and no single effective treatment for Grades 1 or 2 neck pain:**
  - Effective treatment options are all low risk and may provide short-term relief when provided in moderation.
  - Informed patient preferences are key to treatment decisions.
  - A variety of treatments may need to be tried.
- 3. Routine imaging of Grades 1 or 2 neck pain will not increase understanding of causation.**
- 4. There is not enough evidence to support the use of invasive interventions in Grades 1 or 2 neck pain.**
- 5. Providers, policy makers and insurers need to move toward universal, validated, evidence-based treatment guidelines.**