

CURRENT SCIENTIFIC RESEARCH ON NECK PAIN

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Neck pain is a common problem in our society, with 30-50% of adults reporting neck pain at any given time. About two-thirds of people will experience neck pain at some point in their lives. The sources of pain are caused by conditions that compress or irritate pain-sensitive biological tissues such as muscles, ligaments, joints, nerves, and bones. Although most sufferers manage to carry on with their usual activities, some individuals will experience neck pain that can be disabling, negatively impacting work, recreational, and social activities. The purpose of this article is to outline the current understanding of neck pain as recently published in the scientific literature.

The Bone and Joint Decade Task Force On Neck Pain and its Associated Disorders was comprised of international researchers and scientist-clinicians who spent the past seven years undertaking a comprehensive and structured review of the current research on neck pain. The Neck Pain Task Force (**NPTF**) members represented 14 disciplines across nine countries, ranging from neurology and rheumatology to epidemiology and chiropractic. Their findings synthesized the best available evidence on the onset, course and prognosis, assessment and management of neck pain. Below is a summary of these findings.

The cause of neck pain is usually multi-factorial, meaning that there is usually no single cause of neck pain. Factors such as overall physical and mental health, work and daily activities are just a few factors that can contribute to the development of neck pain. Most causes of neck pain are 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. Routine imaging will not increase understanding on causation nor contribute any additional clinical information in the management of neck pain. 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.



The **NPTF** recommended classifying neck pain into the following categories:

GRADE 1: Neck pain with no signs or symptoms suggestive of major structural pathology, and little or no interference with daily activities

GRADE 2: Neck pain with no signs or symptoms suggestive of major structural pathology that limits daily activities

GRADE 3: Neck pain with no signs or symptoms suggestive of major structural pathology, with presence of neurologic signs of nerve compression (radiculopathy) such as decreased tendon reflexes, weakness or sensory deficits (i.e. “pinched nerve” – pain weakness and/or numbness in the arm)

GRADE 4: Neck pain with signs or symptoms suggestive of serious structural pathology (i.e. tumor, fracture, infection, systemic or visceral disease)

Evaluation of neck pain should include a proper medical history, along with a physical examination consisting of inspection, palpation for tenderness, range of motion, strength, neurological, provocative/orthopaedic and functional testing. Diagnostic imaging is not indicated for Grades 1 and 2 neck pain. The evaluation and assessment of neck pain must rule out serious causes of neck pain symptoms (Grade 4) before appropriate treatment can be administered.

The majority of neck pain is classified as Grade 1 or 2. The **NPTF** found scientific support for the following treatments in Grades 1 and 2 neck pain: education, exercise, mobilization, manipulation, acupuncture, soft tissue therapy, and analgesics. All of the recommended treatments were determined to have an excellent safety profile, with major complications exceedingly rare and likely equivalent across treatments. Individuals with Grades 1 and 2 neck pain should be re-assured that they do not have a serious medical condition.

There was no “best” treatment that was effective for everyone. Trying a variety of therapies or combination of therapies may be required to find relief. The **NPTF** recommended that individuals play an active role in managing their neck pain by staying physically active, returning to their usual activities as tolerated, exercising, and reducing mental stress. Individuals need to have realistic expectations, as pain relief is often modest and short-lived.

There was inconclusive scientific evidence with respect to non-surgical management of Grade 3 neck pain. The **NPTF** recommends proceeding cautiously with these cases. The majority of Grade 4 neck pain will require medical management by the appropriate health discipline specialty. The **NPTF** found relatively little research on what does or does not prevent neck pain from occurring in the first place or from recurring. For example, ergonomic assessments and cervical pillows may or may not help. This is likely due to the multi-factorial causes of neck pain, and reiterates the point made by the **NPTF** for trying a combination of therapies and active self-management.

The **NPTF** has provided regulated health professionals, public and private insurers, and the general population a better understanding of neck pain. Most people can expect to experience some neck pain in their lifetimes. The majority of neck pain does not represent any serious structural problems. For those with neck pain that may be interfering with their activities of daily living, a qualified health professional can prescribe appropriate conservative therapy, rehabilitation and self-management strategies specifically for your circumstance. For more information, visit www.nhwc.ca.

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