

### **Neck Pain**

#### THE EXTENT OF THE PROBLEM

### 1. Neck pain is a global problem

Neck pain is one of the most common musculoskeletal conditions on a global scale [35]. Neck pain has been defined based on e.g. anatomic landmarks, severity or duration of pain as well as reason for onset (e.g. trauma, work-related or unknown/idiopathic)[23; 29; 30]. Despite increasing knowledge on neck pain and underlying causes, it is not possible to identify a specific lesion in the majority of cases with current standard imaging and laboratory tests [5; 19].

# 2. Gender and age differences

Neck pain is more commonly reported in women compared to men while the prevalence follows similar trajectories in both sexes, peaking around the age of 50 years (950-54 345-49) and declining thereafter [35].

#### **COMMON FINDINGS IN PEOPLE WITH NECK PAIN**

While many different aspects of neck pain have been investigated, a few of the most frequent findings are outlined here.

# 3. Common findings from diagnostic imaging

Degenerative changes in the cervical spine are a common feature in people seeking care for their neck pain. However, while neck pain is often attributed to such degenerative changes, this is often not the case. The prevalence of degenerative changes seems to be comparable between clinical and pain free populations [18]. Similarly, degenerative changes progress over time without being related to development / worsening of neck pain except for conditions such as stenosis [11].

### 4. Neck pain and posture

Spinal pain is commonly attributed to sub-optimal posture [26; 37]. While there are studies indicating a potential relationship between "poor" postural shape and neck pain, this relationship is not always clear and postures during functional tasks may be more relevant [17; 39; 40; 42]. Studies from the adult and adolescent populations indicate that an association between static postural shape and neck pain may simply be coincidental rather than causative [20; 34] while the nature of such associations during functional tasks remains unclear. Taken together, interpreting posture in neck pain patients should be done with care as the relationship may not be as simple as often assumed.

## 5. Neck pain and headache

Neck pain has been associated with both primary headaches such as tension type headache and migraine as well as secondary headaches with the most common one being cervicogenic headache where cervical structures are a direct cause of the headache [1; 6; 8; 24; 27]. With this in mind, it is essential that clinicians consider the neck in the assessment and potentially in the chosen

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management strategies, depending on the type of headache and whether the neck pain is related to cervical musculoskeletal dysfunction [24].

## 6. Neck pain alters control of muscles

A common feature of neck pain is altered neck and axioscapular muscle function [7; 9; 14], and to varied extents, impaired kinesthetic sense [12; 38], reduced movement variability and increased trunk stiffness [2; 15].

### 7. Neck pain and pain sensitivity

Widespread hypersensitivity is not often seen in idiopathic neck pain but can be a feature in whiplash-related neck pain [9; 10; 36]. In cases where widespread hypersensitivity is observed, facilitated central pain mechanisms are suggested to underlie such findings [9; 10; 36].

## 8. Neck pain, thoughts, beliefs and sleeps disturbances

Like other painful spinal conditions, unhelpful thoughts, negative emotion and problems with sleeping can be related with persistent neck pain and if present, these should be considered in the management strategy [28; 32].

#### **MANAGEMENT OF NECK PAIN**

Many different management strategies exist for neck pain and no single modality can address all issues. Instead, a multimodal patient-centered approach is recommended where modalities such as exercise and manual therapy can be used in addition to a thorough patient-specific explanation (including possible underlying reasons for the condition and potential work practice and self-management strategies).

#### 9. Neck pain and exercise

Exercise is useful in the rehabilitation of neck pain, where both neck specific and more general exercises have shown effective for reducing pain and disability and restoring muscle function[4; 13; 21]. Although most studies find a beneficial effect of exercise, there is currently no consensus on the appropriate dosage [41]. When choosing a management strategy for neck pain patients there are many factors to consider. It is important to address the specific issue at hand as different exercise interventions target different impairments. Some exercises may for instance, be better at increasing strength or endurance of neck muscles while others may be better suited for improving motor control or cervical kinesthetic sense [4; 31]. Moreover, it is important that the intervention of choice is patient-centered and, when possible accommodates both patient and clinician preferences [3; 25]. Taken together, an individualized exercise approach is believed to provide better outcome compared to a standardized exercise approach [16].

# 10. Neck pain and manual therapy

Manual treatment can be useful as part of a multimodal approach for managing neck pain and has been proven effective with regards to pain and disability [22]. When adding manual therapy to the management strategy, it should account for patient and clinician preferences and must be aligned with contemporary knowledge of the pain system [33].

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