

# Acute neck pain

An overview of best practice

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- Neck pain is common and most people do not seek care.
- Of those who do seek care, many find neck pain tends to persist or recur.
- For the majority of patients, no imaging or laboratory investigation is required.
- Reassurance and encouragement to remain active are the mainstays of treatment in most patients.
- Manual therapy, exercise interventions, analgesics and acupuncture have been shown to be helpful for short-term relief of neck pain only.

### Background

Neck pain is a common complaint. For most patients, a specific pathological process is not identified and extensive investigation is not indicated.

The 12-month prevalence estimates for neck pain range from 30% to 50% in the adult population. The majority of such patients do not seek health care and for most it does not limit daily activities.<sup>1</sup>

Recurrent or persistent symptoms occur in 50-85% of patients. Poor health, prior pain episodes and psychological factors have a negative effect on prognosis, while younger people tend to fare better.<sup>2</sup>

### Assessment

The main aims in the management of acute neck pain are to alleviate symptoms, return the person promptly to their pre-injury level of functioning and identify the small number of patients who have a more significant underlying injury or disease process.

Following blunt trauma to the neck, screening protocols such as the Canadian C-Spine Rule and the NEXUS Low Risk Criteria effectively identify low-risk patients who do not require imaging.<sup>3</sup>

In the absence of trauma, a system of **red flags** similar to those used in low back pain assessment may be helpful in ruling out serious pathology (history of cancer, unexplained weight loss, fever, intractable pain, prior neck surgery, IV drug use, infections). Pain that radiates to the upper limb and may be exacerbated by certain neck movements or impulse (cough/sneeze) suggests radicular pain owing to compromise of a nerve root.

Neck pain and disability are multifactorial. Environmental and psychosocial factors may have a significant bearing on the clinical course and require addressing where identified.

Physical examination should include inspection for muscle wasting, scars, swelling and erythema. Assessment of neck movement and tenderness may help in monitoring progress. A negative neurological examination is useful for excluding nerve root compression. Provocative tests such as head rotation to the contralateral side with extension of

the arm and fingers have high predictive value for radiculopathy.<sup>3</sup>

The Bone and Joint Decade 2000-2010 Task Force on Neck Pain has published a descriptive clinical classification system for neck pain that can be used to direct management.<sup>4</sup>

In the absence of signs or symptoms to suggest major structural pathology or significant nerve root compression (grades 1 and 2), no imaging or laboratory investigation is required. Those with severe radicular pain or major neurological abnormality should be considered for CT or MRI imaging and specialist referral. Degenerative changes of the cervical spine seen on imaging are most often unrelated to neck pain.<sup>3</sup>

## Treatment

Most patients will have grade 1 or grade 2 neck pain. Reassurance, simple analgesics and encouragement to remain active in all facets of their lives including work, are the mainstays of treatment. Immobilisation of the neck should be avoided. Some patients may prefer or expect additional therapies to be recommended. Exercise training, mobilisation, manipulation, acupuncture and analgesics are all likely to be helpful for short-term pain relief; however, the clinical effect is unlikely to be substantial.<sup>4</sup> There is no evidence that any particular intervention improves prognosis or significantly affects the natural history; however, there is evidence that high rates of health-care use may slow recovery.<sup>5</sup>

Information about the natural course of neck pain is likely to help patients to understand their condition and should reduce anxiety and ability to cope. The Task Force on Neck Pain suggests that a shift in current thinking about neck pain is needed. Rather than neck pain being considered a sign of a disease or injury that needs to be diagnosed and treated, it is a common occurrence in life where self-management should be encouraged.<sup>4</sup>

Treatment guidelines according to the Task Force on Neck Pain are as follows.

**Grade 1 Neck Pain:** No symptoms or signs of major pathology and no, or little, interference with daily activities.

- No further investigation
- Reassurance that significant underlying pathology is unlikely
- Self-care (remain active, simple analgesics, avoid immobilisation)
- Occasionally conservative therapy options

**Grade 2 Neck Pain:** No symptoms or signs of major pathology, but interference with daily activities.

- No further investigation
- Reassurance that significant underlying pathology is unlikely
- Assess for environmental or personal factors that may be contributing to the clinical presentation
- Consider conservative therapy options

**Grade 3 Neck Pain:** Neck pain with neurological signs or symptoms (radiculopathy).

- Does not require immediate referral or investigation unless major neurological deficit exists
- Manage symptomatically (there is little evidence for or against specific therapies)
- Close monitoring to detect any progression of neurology
- Referral and investigation if progression of neurological deficits, intractable pain persists despite four to six weeks of conservative treatment.

**Grade 4 Neck Pain:** Neck pain with symptoms or signs of major structural pathology.

- Referral or investigation dependent on the suspected underlying pathology

Failure to respond appropriately after four to six weeks requires reassessment and where appropriate investigation or referral.

## References

1. Hogg-Johnson S et al. The burden and determinants of neck pain in the general population. *Spine* 2008; 33 (Suppl): S39-S51.
2. Carroll L et al. Course and prognostic factors for neck pain in the general population. *Spine* 2008; 33 (Suppl): S75-S82.
3. Nordin M et al. Assessment of neck pain and its associated disorders. *Spine* 2008; 33 (Suppl): S101-S122.
4. Guzman J et al. Clinical practice implications of the Bone and Joint Decade 2000-2010 Task Force on Neck Pain and its associated disorders. *Spine* 2008; 33 (Suppl): S199-S213.
5. Hurwitz E et al. Treatment of neck pain: Noninvasive interventions. *Spine* 2008; 33 (Suppl): S123-S152.