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Neck Pain

A sudden-onset (acute) bout of **neck pain** is common. Two out of three of us will have neck pain at some time in our lives. In most cases it is not due to a serious disease or neck problem and often the exact cause for the pain is not clear. This is called 'nonspecific neck pain'. Most are probably due to minor sprains or bad posture. Full recovery occurs in most cases. The usual advice is to keep the neck active. Painkillers are helpful until the pain eases. Persistent (chronic) pain develops in some cases and further treatment may then be needed.

Understanding the neck

The back of your neck includes the cervical spine and the muscles and ligaments that surround and support it. Your cervical spine is made up of seven bones called vertebrae.

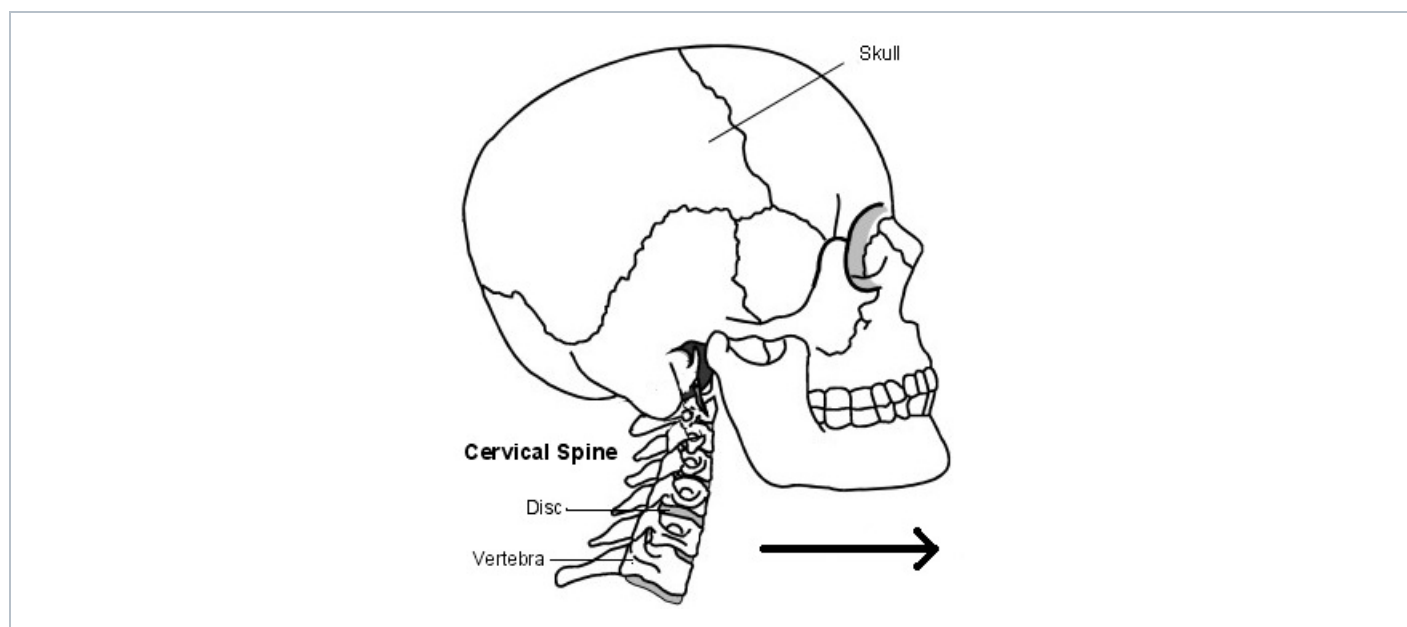
- The first two are slightly different to the rest, as they attach your spine to your skull and allow your head to turn from side to side.
- The lower five cervical vertebrae are roughly cylindrical in shape - a bit like small tin cans - with bony projections.

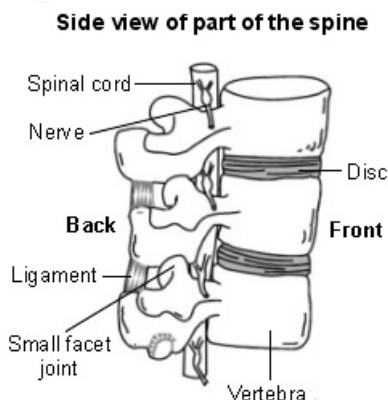
The sides of your vertebrae are linked by small facet joints.

Between each of your vertebrae is a disc. The discs are made of a tough fibrous outer layer and a softer gel-like inner part. The discs act like shock absorbers and allow your spine to be flexible.

Strong ligaments attach to adjacent vertebrae to give extra support and strength. Various muscles attached to your spine enable your spine to bend and move in various ways. (The muscles and most ligaments are not shown in the diagram, for clarity.)

The spinal cord, which contains nervous tissue carrying messages to and from your brain, is protected by your spine. Nerves from your spinal cord come out from between the vertebrae in the neck to take and receive messages to the neck and arms. A major blood vessel called the vertebral artery also runs alongside the vertebrae to carry blood to the rear (posterior) part of your brain.





What are the types and causes of neck pain?

Neck pain is common. About 2 in 3 people develop a bout of neck pain at some time in their lives. One survey done in the UK found that, of adults aged 45-75 years, about 1 in 4 women and about 1 in 5 men had current neck pain.

Types and causes of neck pain include:

Nonspecific neck pain

This is the most common type. This is sometimes called 'simple' or 'mechanical' neck pain. Often the exact cause or origin of the pain is not known. It may include minor strains and sprains to muscles or ligaments in the neck. Bad posture may also be a contributing factor in some cases. For example, neck pain is more common in people who spend much of their working day at a desk, with a 'bent-forward' posture.

A 'whiplash' jolt to the neck

This is most commonly due to an accident involving a vehicle, such as a car crash. It can cause neck pain. [See separate leaflet called Whiplash Neck Sprain for more details.](#)

Sudden-onset (acute) torticollis

This is sometimes called 'wry neck'. A torticollis is a condition in which the head becomes twisted to one side and it is very painful to move the head back straight. The cause of acute primary torticollis is often not known.

However, it may be due to a minor strain or sprain to a muscle or ligament in the neck. Some cases may be due to certain muscles of the neck being exposed to cold (sleeping in a draught). It is common for people to go to bed feeling fine and to wake up the next morning with an acute torticollis. The pain usually eases and clears away, without any treatment, over a few days.

Occasionally, torticollis is due to more serious causes. [See separate leaflet called Torticollis for more details.](#)

Wear and tear (degeneration)

Wear and tear of the spinal bones (vertebrae) and the discs between the vertebrae is a common cause of recurring or persistent neck pain in older people. This is sometimes called cervical spondylosis.

However, most people over the age of 50 have some degree of degeneration (spondylosis) without getting neck pain. [See separate leaflet called Cervical Spondylosis for more details.](#)

Cervical radiculopathy

When the root of a nerve is pressed on or damaged as it comes out from your spinal cord in your neck (cervical) region, the condition is known as cervical radiculopathy. As well as neck pain, there are symptoms such as loss of feeling (numbness), pins and needles, pain and weakness in parts of an arm supplied by the nerve. These other symptoms may actually be the main symptoms rather than neck pain.

The common causes of a radiculopathy are cervical spondylosis and a prolapsed disc. (A prolapsed disc is sometimes called a 'slipped disc' but the disc does not actually slip. What happens is that part of the inner softer area of the disc bulges out (prolapses) through the outer harder part of the disc, pressing on the nerve as it passes out of the vertebra.)

Various less common disorders can also cause cervical radiculopathy. These are discussed in more detail in the cervical spondylosis leaflet.

Rarer and more serious causes

These include rheumatoid arthritis, bone disorders, infections, cancers and serious injuries that damage the vertebrae, spinal cord or nerves in the neck.

The rest of this article deals only with the common 'nonspecific neck pain'.

What are the symptoms of nonspecific neck pain?

Pain develops in your neck and may spread to the shoulder or base of your skull. Movement of the neck feels restricted and moving your neck may make the pain worse. The pain sometimes spreads down an arm, sometimes as far as to your fingers. Sometimes, 'pins and needles' develop in part of your arm or hand. This is due to irritation of a nerve going to your arm from the spinal cord in your neck. Tell a doctor if these symptoms occur, as he or she will want to check there is no significant pressure or damage to a nerve in your neck.

What is the outlook (prognosis) for a bout of nonspecific neck pain?

The outlook is usually good in most cases of sudden-onset (acute) neck pain. Symptoms commonly begin to improve after a few days, and are usually gone within a few weeks. However, the time taken for symptoms to settle varies from person to person.

Some people develop persistent (chronic) neck pain. If you develop chronic neck pain, the tendency is for the pain to come and go with 'flare-ups' from time to time.

Do I need any tests?

Usually not. Your doctor will usually be able to diagnose nonspecific neck pain from the description of the pain, and by examining you. Therefore, in most cases, no tests are needed. There is no test that can prove or confirm nonspecific neck pain. In fact, some doctors argue that tests can actually do more harm than good when the diagnosis is nonspecific neck pain.

For example, the technical jargon used to report on X-rays and scans can sometimes sound alarming, when in fact the test is just showing what would be normal for a given age and not a cause for pain. As previously mentioned, many people over the age of 50 will show some degree of 'wear and tear' (degeneration) on an X-ray, without this necessarily being the cause of the pain.

Current UK guidelines are clear that routine tests such as X-rays and scans should not be done if the diagnosis of nonspecific neck pain is made. Tests such as X-rays or scans may be advised in certain situations. This is mainly if there are symptoms, or signs during a doctor's examination, to suggest that there may be a more serious underlying cause for the neck pain.

How can I tell if the pain is due to a more serious cause?

A doctor's assessment and examination can usually determine that a bout of neck pain is nonspecific and not due to a more serious cause. The following are the sort of symptoms that may indicate a more serious problem:

- If neck pain develops when you are ill with other problems such as rheumatoid arthritis, AIDS, or cancer.
- If the pain becomes progressively worse.
- If some function of an arm is affected. For example, weakness or clumsiness of a hand or arm, or persistent loss of feeling (numbness). (As mentioned, some pins and needles may occur with nonspecific neck pain. However, this is mild and usually goes within four weeks.)
- If you feel generally unwell and have 'general' symptoms such as weight loss or a high temperature (fever).
- If the neck bones (vertebrae) are very tender (which may indicate a bone problem).
- If you develop any problems with walking or with passing urine. This may indicate problems with pressure on the spinal cord.

What are the treatments for nonspecific neck pain?

Exercise your neck and keep active

Aim to keep your neck moving as normally as possible. At first, the pain may be quite bad and you may need to rest for a day or so. However, **gently exercise the neck** as soon as you are able. You should not let it 'stiffen up'. Gradually try to increase the range of the neck movements. Every few hours gently move the neck in each direction. Do this several times a day. As far as possible, continue with normal activities. You will not cause damage to your neck by moving it.

Medicines

Painkillers are often helpful.

- **Paracetamol** at full strength is often sufficient. For an adult this is two 500 mg tablets, four times a day.
- **Anti-inflammatory painkillers**. Some people find that these work better than paracetamol. They can be used alone or combined with paracetamol. They include **ibuprofen** which you can buy at pharmacies or obtain on prescription. Other types such as **diclofenac** or **naproxen** need a prescription. Some people with stomach ulcers, asthma, high blood pressure, renal impairment, or heart failure may not be able to take anti-inflammatory painkillers.

- **A stronger painkiller** such as codeine is an option if anti-inflammatories do not suit or do not work well. **Codeine** is often taken in addition to paracetamol. Constipation is a common side-effect from codeine. To prevent constipation, have lots to drink and eat foods with plenty of fibre.
- **A muscle relaxant** such as **diazepam** is occasionally prescribed for a few days if your neck muscles become very tense and make the pain worse.

Other treatments

Some other treatments which may be advised:

- **A good posture** may help. Check that your sitting position at work or at the computer is not poor. It is important to make sure that your head is not flexed forward and also that your back is not stooped when you are sitting and working. You should make sure you sit upright. Yoga, Pilates and the Alexander Technique all improve neck posture but their value in treating neck pain is uncertain.
- **A firm supporting pillow** seems to help some people when sleeping. Try not to use more than one pillow.
- **Physiotherapy:**
 - Various treatments may be advised by a physiotherapist. These include traction, heat, cold, manipulation, etc. The value of each of these treatments is uncertain, as the results of research studies looking at which treatments work best can be conflicting.
 - However, what is often most helpful is the advice a physiotherapist can give on neck exercises to do at home.
 - A common situation is for a doctor to advise on painkillers and gentle neck exercises. If symptoms do not improve over a week or so, you may then be referred to a physiotherapist to help with pain relief and for advice on specific neck exercises.
- Low-level laser therapy (LLLT) is a relatively uncommon, non-invasive treatment for neck pain, in which non-thermal laser irradiation is applied to sites of pain. It can be effective in some people.

Treatment may vary and you should go back to see a doctor:

- If the pain becomes worse.
- If the pain persists beyond 4-6 weeks.
- If other symptoms develop such as loss of feeling (numbness), weakness, or persistent pins and needles in part of an arm or hand, as described previously.

Other pain-relieving techniques may be tried if the pain becomes persistent (chronic). A pain management programme may be offered to help you control and live with your pain. Chronic neck pain is also sometimes associated with anxiety and depression which may also need to be treated.

Further reading & references

- [Neck pain - acute torticollis](#); NICE CKS, April 2015 (UK access only)
- [Neck pain - non-specific](#); NICE CKS, April 2015 (UK access only)
- [Gross AR, Paquin JP, Dupont G, et al; Exercises for mechanical neck disorders: A Cochrane review update. Man Ther. 2016 Aug;24:25-45. doi: 10.1016/j.math.2016.04.005. Epub 2016 Apr 20.](#)

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