

# NECK PAIN

PHYSIOTHERAPY

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**MAKING A  
DIFFERENCE  
FOR YOU,  
WITH YOU**

## DEFINITION:

Neck pain is a very common problem in the general public, but it is not usually a sign of arthritis or any other underlying medical condition. 60-70% adults experience this at some point during their lives. The pain can be acute or chronic, and can arise due to pathology either within the neck or elsewhere in the body. The physical/anatomical cause of neck pain remains undisputed and is affected by a number of factors.

## WHAT CAUSES NECK PAIN?

Neck pain can occur at any age but is more common at older ages. It may come as a result of trauma (e.g. whiplash injury), you may wake with pain or it may come gradually for no apparent reason. There are many different reasons for developing neck pain. Not only can the pain be present in the neck itself, but symptoms such as headaches, pain, tingling, and/or numbness into the upper extremity can be related to the neck.

Neck pain is the fourth leading cause of disability worldwide. With a lifetime prevalence of 71%, most adults can expect to experience an attack at some point during their lifetime. During any six-month period, 54% of adults suffer from neck pain and 4.6% experience important activity limitations. The prevalence of neck pain peaks in middle age and it is more common in women.

The great majority of neck pain is mechanical, arising from the bones, discs, ligaments or muscles of the spine. There are many potential origins of neck pain, but it is often a result of one or more of the following:

- **Injuries:** Sports-related injuries, car accidents, or falls can cause a neck sprain (often called "whiplash"). When the neck is forced to move beyond the normal range of motion, muscles, ligaments, and other soft tissues are stretched. This may cause pain, swelling, and limited motion.
- **Posture:** The spine needs to be in balance with the line of gravity. Weak musculature of the trunk and neck or poor

postural alignment (head forward, repetitive leaning over, hunched shoulders, or looking in one direction) can create muscular fatigue, joint compression, or musculoskeletal imbalances. This may result in tightness or pain.

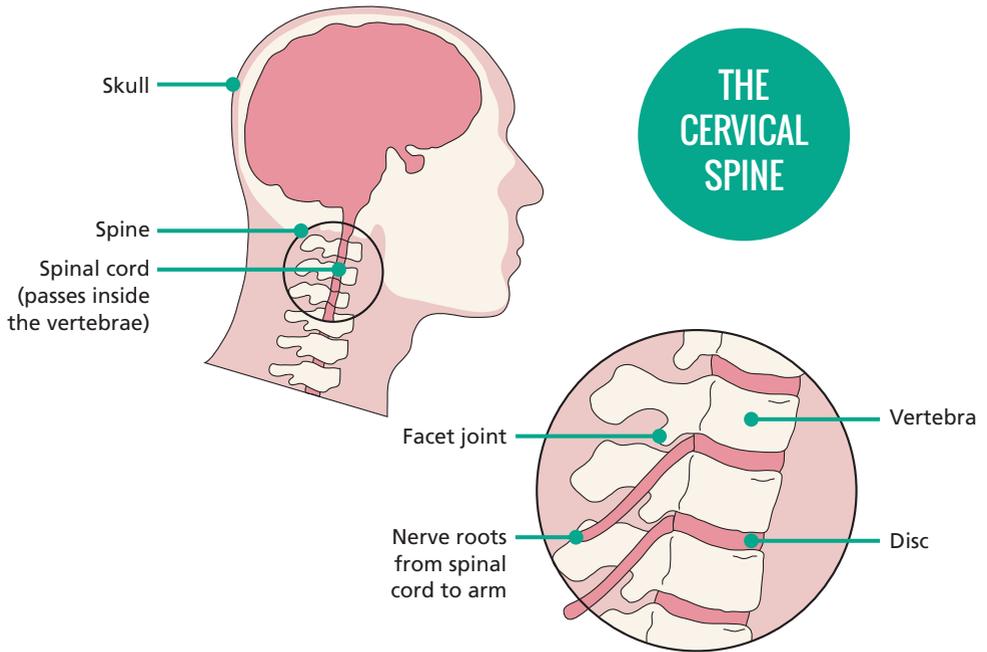
- **Emotional stress:** Stress can contribute to holding patterns in the neck by contracting the neck/shoulder muscles. This may aggravate or prolong healing of an existing neck injury.
- **Wear and tear:** With age, the spine undergoes changes in the discs and joints which can be exacerbated by lifelong poor posture. The degeneration of the discs and joints often creates stiffness or swelling, and may cause impingement of the nerve root at one or several levels in the spine. you have this problem or not by asking you questions and through further examination of your shoulder. You may need other tests e.g. x-ray, but this is not always necessary as it is considered that frozen shoulder can be clinically diagnosed following assessment.

## HOW DOES THE NECK WORK?

The neck (cervical spine) is made up of seven bones called vertebrae, with discs between each vertebrae which act as shock absorbers and allow the neck to move.

The vertebrae are supported by strong ligaments (fibres that link the bones together) and muscles which enable the neck to move. Within the vertebrae is the spinal cord which contains nerves carrying messages to and from the brain. Nerves come out from between the vertebrae in the neck to take and receive messages to the arms. A major blood vessel called the vertebral artery also runs alongside the vertebrae to carry blood to the brain.

Evidence from the systematic reviews (research) indicates that prior history of neck pain are the strongest and most consistent risk factors for new-onset neck pain in office workers and the general population, especially in females. Older age, high job demands, smoking history and low social/work support may also be risk factors.



## WHAT ARE THE SYMPTOMS OF NECK PROBLEMS?

**Pain and stiffness** – pain may be in middle of the neck or to one side. Pain may travel to the shoulder or shoulder blade. Muscles may feel tight and stiffness may be worse after rest.

**Numbness and tingling** – if a nerve is compressed you may feel numbness or tingling down the arm to the fingers.

**Clicking or grating noises** – you may hear or feel this as you move your head. This is caused by roughened bony surfaces moving against each other. It is a common symptom but is not serious.

**Dizziness and blackouts** – if you feel dizzy when looking up or turning your head, this may be due to pinching of the vertebral arteries and can sometimes happen as a result of changes in the vertebrae. This kind of dizziness can have other causes, so it's best to seek medical advice.

## MANAGEMENT/TREATMENT OPTIONS FOR NECK PAIN?

**Pain Relief:** Gentle heat, or an ice pack, can help to reduce the pain in your neck. A hot water bottle wrapped in a thick towel or a microwave heat pack placed across your neck and shoulders (with you in a good sitting or lying position) for ten minutes at a time can help. If using an ice pack, oil the area of skin first, put the ice pack in a damp tea towel and put the towel in contact with the skin. Always check the skin before and after to make sure you do not burn your skin.

If necessary, try taking your regular simple analgesia (such as paracetamol) or anti-inflammatories such as ibuprofen. If you have any other medical problems such as asthma or stomach ulcers, please consult your GP or Pharmacist first before taking any off-counter pain killer tablets.

**Physiotherapy:** If your neck pain is affecting your activity and is persisting, ask your GP about referral to a physiotherapist. Physiotherapy can help you manage the pain and improve your strength and flexibility. A physiotherapist can provide a variety of treatments, help you understand your problem and get you back to your normal activities.

Good posture can help to reduce neck pain. When sitting in a chair, sit upright in the chair and place a rolled towel in the small of your back. Make sure your shoulders are in line with your hips and your chin is not poking forward. Sitting correctly reduces the strain on muscles and ligaments. When standing make sure your shoulders are back and your chin is tucked in.

Exercise the neck to keep the joints mobile and the muscles flexible. At first the pain may be quite bad, and you may need to rest for a day or so. Gently exercise the neck as soon as you are able again. Do the exercises attached regularly within pain range and gradually try to increase the range of the neck movements. Avoid rolling the neck in circular motions.

Keep active and see your doctor if the pain becomes worse and or lasts longer than 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, you should seek medical advice.

**Sleeping:** Do not sleep with more pillows than necessary. Generally, it is best to use just one pillow. Sleep on your back or on your side. Do not sleep face down.

**Sitting position:** Avoid sitting slumped, with your chin poked forwards and shoulders forwards. It helps to sit in a straight-backed chair with some support such as a rolled up towel or small pillow in the small of your back.

**Remember to change position frequently, get up regularly and walk around.**

Also remember your neck posture when driving, reading or other activities where you look down for periods of time. If sitting and working, adjust your seat to gain maximum comfort.

## EXERCISE:

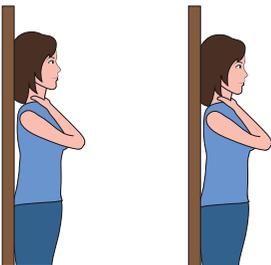
Do your exercises for short periods of time and frequently throughout the day.

## NECK RETRACTION



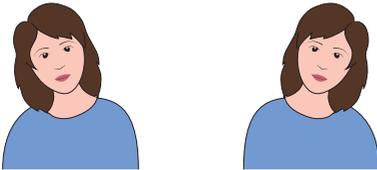
- Lie down on your back with your head resting on a pillow. Retract your head as you were pressing down slowly (no tilting up or down) on the pillow with the back of your head.

## DEEP NECK FLEXORS STRENGTHENING



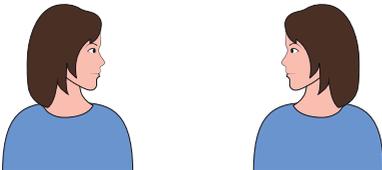
- Stand with the back of your head on the wall and your feet out from the wall, with your knees slightly bent.
- You can place your hand across the front of your neck just above your collarbone to monitor unwanted activity of the surface muscles.
- Place your tongue on the roof of your mouth, with your jaw relaxed.
- Keeping the head in contact with the wall, slide the back of the head up the wall as you nod your chin down as far as you can go without the surface muscles tightening under your fingers.
- Hold for the time instructed and then return to the starting

## NECK TILT



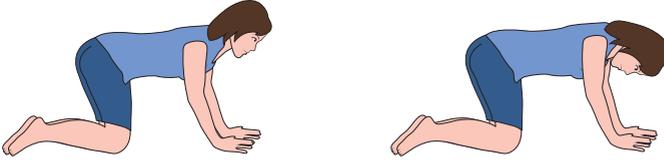
- Stand or sit tall.
- Without turning the head, slowly tilt your head sideways to bring your ear to your shoulder.
- Return to the neutral position and repeat.

## ACTIVE NECK ROTATION



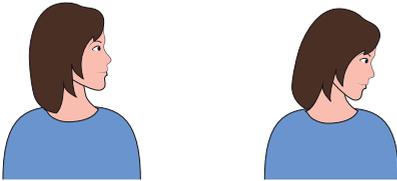
- Position yourself in tall sitting or semi-reclined position.
- Tuck your chin in and turn your head to one side for the prescribed number of repetitions.
- Repeat on other side.

## CERVICAL EXTENSION EXERCISES



- Start on all fours with a neutral neck position and your chin tucked slightly.
- Lower your head segmentally to bring the chin to your chest. Think about rolling the neck vertebrae by vertebrae, starting with the head.
- Reverse the steps to lift the head, starting with the base of the neck and finishing with the head.

## CERVICAL NOD RIGHT AND LEFT (SEATED)



- Sit on a chair.
- Lift your breastbone up slightly and draw your shoulder blades back to obtain a good posture.
- Rotate your head to the left and nod your chin down as far as you can without involving the neck. Only the head should move.
- Hold the nod at that point. Then relax and turn your head to the starting position and repeat.
- Return your head to the center only at the end of all repetitions.

## FURTHER MANAGEMENT OPTIONS:

**Joint Injection/Denervation of the Nerve:** Cervical epidural injections are also common modalities of treatments provided in managing neck and upper extremity pain. Systematic review with qualitative best evidence shows Level II evidence for the efficacy of cervical interlaminar epidural injections with local anesthetic with or without steroids, based on at least one high-quality relevant randomized control trial in each category for disc herniation, discogenic pain without facet joint pain, central spinal stenosis, and post-surgery syndrome.

**Surgery:** Neck surgery is rarely needed especially for unsettled arm pain due to nerve impingement despite painkillers and physiotherapy. Surgery can help arm symptoms but results of the neck surgery are no better than non-surgical interventions such as physiotherapy.

### TOP TIPS:

- Maintaining a good posture is of prime importance in the recovery of neck problems. Avoid slouching.
- When sitting try and use a rolled-up towel or a lumbar roll to maintain the curve in your lower back.
- Avoid long periods of sitting at a time and regularly move about - (every 15-20 minutes).
- If reading, sewing etc. rest your elbows on arm rests or pillows and work for short periods at a time.
- If these exercises produce any unexpected level of pain, please stop and discuss this further with your Physiotherapist.

## PROGNOSIS:

The prognosis of neck pain is difficult to predict. It is dependent upon the exact cause of the pain and also on psychosocial factors.

- In one small study that followed up patients with a history of soft tissue injury to the neck, some symptoms were said to persist in 86% at 10 years with intrusive symptoms reported in 23%. A worse prognosis was associated with multiple symptoms and paraesthesia.
- Most patients with neck pain and cervical spondylosis do well with conservative treatment, providing 70-75% relief of symptoms. They are not at significantly increased risk of developing myelopathy.
- The NATO Research and Technology Association has hypothesised that although pilots exposed to high G-forces are at risk of premature degenerative cervical changes, in time, the level of cervical spine degeneration becomes equivalent with that of the general population. This is supported by a 5-year follow up MRI study comparing military high performance pilots to age-matched controls without military flying experience.

## REFERENCES/RECOMMENDED READING:

Lifestyle and Medication for neck pain

[www.csp.org.uk/your-health/conditions/neck-pain](http://www.csp.org.uk/your-health/conditions/neck-pain)

A Pain in the Neck SPINE HEALTH: <https://www.researchgate.net/publication/281454165>

Basic Exercises:

[www.csp.org.uk/sites/files/csp/secure/4\\_neck\\_pain.pdf](http://www.csp.org.uk/sites/files/csp/secure/4_neck_pain.pdf)

[www.arthritisresearchuk.org/arthritis-information/conditions/neck-pain/neck-pain-exercises.aspx](http://www.arthritisresearchuk.org/arthritis-information/conditions/neck-pain/neck-pain-exercises.aspx)

[www.physiofirst.org.uk/RelatedFiles/NeckPainWebDownload.pdf](http://www.physiofirst.org.uk/RelatedFiles/NeckPainWebDownload.pdf)

[www.arthritisresearchuk.org/arthritis-information/conditions/neck-pain](http://www.arthritisresearchuk.org/arthritis-information/conditions/neck-pain)

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Inspected and rated

**Outstanding** ★



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