

Neck Pain in Adults, Whiplash, Arthritis and Cervical Disc Prolapse

Episodes of acute neck pain are usually short lived and are commonly associated with a rapid and full recovery. They commonly result from minor injuries, or a bad posture at work, when driving or computing. The usual advice is to stretch and maintain the flexibility of the neck. Painkillers and NSAID's are helpful. If severe, chronic or persistent pain develops further treatment may then be needed.

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Neck pain is common. More than half of people develop a bout of neck pain at some time in their life. The causes commonly include the following conditions:

- **'Mechanical' neck pain.** This includes minor injuries or sprains to muscles or ligaments in the neck. Bad posture is also a common cause. For example, neck pain is more common in people who spend much of their working day at a desk with a 'bent-forward' posture. Often the exact cause or origin of the pain is not known. Fortunately recovery often occurs before the need for investigation arises.
- **Degeneration or wear and tear of the neck.** Commonly the neck bones or vertebrae and the discs between them become worn, deformed or arthritic. This is a common cause in older people. This is sometimes called cervical spondylosis. The symptoms may include pain from the nerve root which may be experienced or shoot into the arm or hand.
- **More general causes.** Causes of general arthritis of rheumatoid arthritis, the small facet joints of the neck, or problems with the neck musculature may result in pain.
- **Whiplash.** Perhaps the most common cause of acute neck pain in the younger population is from a rear end road traffic accident or resulting in a characteristic whiplash type injury. , bone disorders, and serious injuries that damage the vertebrae or spinal cord in the neck.

Symptoms of common mechanical neck pain

Pain develops in the neck and may spread to the base of the skull and shoulders. Movement of the neck may make the pain worse. The pain is worse when upright or sitting reading, at a desk or computer terminal. The pain may spread down an arm to a hand or fingers. This is due to irritation of a nerve going to the arm from the spinal cord in the neck.

Some numbness or pins and needles may occur in part of the arm or hand. It is best to tell a doctor if these symptoms occur as they may indicate a problem with a nerve in the neck.

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

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

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

- If neck pain develops when you are ill with other problems such as infections, cancer, or rheumatoid arthritis.
- If the pain becomes severe or persistent.
- If some function of an arm is affected. For example, pins and needles, weakness or clumsiness of a hand or arm, or persistent numbness.
- If you feel ill with other symptoms such as weight loss, fever, loss of appetite, headaches or difficulty swallowing.

- If the neck bones are tender to the touch.

Symptoms of Cervical Degeneration and Arthritis.

The symptoms tend to be of a gradual onset. Initially with discomfort at night, stiffness when driving, typing or sitting at a desk. There may be a dull referred pain into the shoulder or upper arm. Eventually the neck may feel weak and the head heavy. Radicular nerve symptoms may occur causing pain to radiate into the arms or hands, altered sensation, numbness or tingling in the fingers. The stiffness may eventually become problematical with the inability to lift the head or even to look forwards. Eating, swallowing or breathing may be compromised. The symptoms may be relieved by anti-inflammatory medication, physiotherapy or use of a supporting collar. Eventually surgery to fuse or stiffen the neck and correct the malalignment may prove necessary.

Symptoms of Whiplash.

A whiplash injury usually occurs when the body is shunted from behind. The head is the heaviest and densest part of the body and is supported by the stork of the neck. When the body is shunted from behind the inertia or weight of the head means that the head is thrown backwards into extension. This may cause damage to the ligament and muscles of the neck, damage the inter-vertebral discs or the small inter-vertebral facet joints of the neck. Occasionally fractures and dislocations may occur.

Alternately or in association with a rear shunt a front impact may occur. This has the effect of throwing the head forwards. Particularly if the body is restrained by a seat belt. Prior to the use of the seatbelt it was not uncommon for the head to hit the windscreen and be thrown backwards. When the head is thrown forwards the anterior aspect of the vertebral bodies of the cervical spine may be damaged. The posterior structures and ligaments stretched and the inter-vertebral facet joint damaged or subluxed. The anterior cervical structures may be compressed or injured.

The symptoms may be immediate or delayed. For more minor injuries it is not uncommon for the symptoms to be delayed in their onset for a few hours or even overnight. The symptoms are usually of posterior or lateral neck pain, stiffness and a feeling that the head is heavy. There may be referred pain felt radiating into the shoulders or upper arms. There may be tingling or numbness affecting the hands. Associated symptoms may also include pain radiating up to the occipital region of the head, difficulty swallowing or back pain. The symptoms may become worse and more apparent over the next few days or even a week.

Treatment was traditionally to use a supportive collar for the neck. However for minor injuries early physiotherapy and movement has been shown to be most beneficial. Anti-inflammatory medication (NSAID's) and possibly analgesia may be necessary (Paracetamol or Codeine phosphate). Early physiotherapy should be sought. Intermittent use of a collar may prove beneficial particularly at night or when working at a desk. An orthopaedic pillow "Wave Pillow" or a neck roll at night may be helpful. If the pain or stiffness is severe or if there is any radiating pain or nerve symptoms then early medical assessment should be undertaken. Investigations may include cervical spine X-rays or MRI scan. The symptoms can take a variable length of time to settle depending on the severity and extent of the injuries. Most minor or mild injuries would settle within 6 weeks with a return to full function by 3 months. Some patient may have more persistent symptoms which will require investigations. Surgery is rarely required. A few patient may have permanent symptoms and restrictions in their activities. Occasionally patients with inter-vertebral or disk injuries may go on to develop osteoarthritis.

Treatment

Stretching, exercise and physiotherapy

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 stretch 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. Avoid those activities and postures which exacerbate the symptoms and make the neck more painful.

In the past, some people have worn a neck collar for long periods when a bout of neck pain developed. The problem with collars is that they prevent you from moving your neck. Studies have shown that you are more likely to make a quicker recovery if you do regular neck exercises, and keep your neck active rather than resting it for long periods in a collar. Also, if you keep the neck active during a bout of neck pain, it is thought to help prevent chronic or persistent neck pain from developing. A trained physiotherapist may be of great assistance with various forms of therapy. General physiotherapy advice includes:

- **A good posture may help.** Brace your shoulders slightly backwards, and walk 'like a model'. Try not to stoop when you sit at a desk. Sit upright.
- **A firm supporting pillow** seems to help some people when sleeping.
- **Physiotherapy.** It is not clear whether this makes much difference to the outcome of mechanical neck pain. Therapies such as traction, heat, cold, manipulation, etc, may be tried, but the evidence that these help is not strong. What may be 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 begin to settle over a week or so, you may then be referred to a physiotherapist to help with pain
- **Stretching exercises** of produce some relief and description of the specific exercises are available in the physiotherapy section..
- **Neck brace or collar.** Neck support used to be widely and routinely used for neck pain, torticollis, whiplash injuries and arthritis of the neck. However prolonged immobilisation is now thought to be counterproductive resulting in neck stiffness. However in some situations a neck collar may still be very useful such as in the early stages following an whiplash injury, for acute or severe neck pain or a disc prolapsed or when sitting at a desk working or typing on a computer.

Medicines

Painkillers are often helpful. It is best to take painkillers regularly until the pain eases. This may help enable you to exercise and keep your neck mobile and active. Non steroidal anti-inflammatories are preferable to simple analgesics or pain killers. The NSAID's reduce the surrounding inflammation in addition to providing an analgesic or pain killing effect. This may be more effective and help reduce stiffness and maintain mobility.

- **Paracetamol** at full strength is often effective. For an adult this is two 500mg tablets, four times a day. Stronger painkillers such as codeine or Dihydrocodeine are an option if anti-inflammatories do not suit or do not work well. These are often taken in addition to Paracetamol. Constipation is a common side-effect from codeine and Dihydrocodeine. To prevent constipation, have lots to drink and eat foods with plenty of fibre.
- **NSAID: Anti-inflammatory drugs.** These include ibuprofen which you can buy at pharmacies or get on prescription. Other types such as Diclofenac, Naproxen, or Tolfenamic need a prescription. Some people with asthma, high blood pressure, kidney failure, or heart failure may not be able to take anti-inflammatory painkillers.
- **Muscle relaxants.** These drugs such as diazepam is sometimes prescribed for a few days if your neck muscles become tense and make the pain worse.

Other advice

The various treatments advised by various therapists and doctors may vary to some degree. However you should return to see your doctor for advice and supervision. This should be undertaken if:

- The pain becomes worse.
- The pain persists beyond 4-6 weeks.
- Other symptoms develop such as numbness, weakness, or pins and needles in an arm or hand.

Other pain relieving techniques may be tried if the pain becomes chronic (persistent). Chronic neck pain is also sometimes associated with anxiety and depression which may also need to be treated.

To drive safely you must be able to turn your head quickly. It is perhaps best not to drive until any bad pain or stiffness has settled. Certainly it is unsafe to drive if your mobility, ability to look behind or control the vehicle is affected.

Surgery.

If the pain becomes intractable or radicular or radiating pain occurs which shoots down into the arms occurs. Or if weakness or tingling in the hands occurs then urgent investigation and treatment should be sought.

The pain may originate from loss of disc height and degeneration between the cervical vertebrae. Protrusion of a cervical disc may cause local neck pain and stiffness. If the pain radiates into the arms or there is referred or radicular pain then the disc protrusion, prolapsed or bulge may be pressing on one of the cervical nerves emerging from the cervical spine. Alternately disruption of the vertebral stability may occur from injury

(whiplash, fall etc) or from severe arthritis and degeneration (eg Rheumatoid arthritis or osteoarthritis). Alternately occasionally the pain may originate from an infection in the vertebral bones or cervical discs. Occasionally a growth or tumour may be cause of the symptoms.

In the case of a disc prolapse and intractable pain or radicular symptoms then a cervical disc decompression from a neurosurgeon may be indicated. If the pain is from degeneration between the cervical vertebral bodies and joints then it is now possible to replace the cervical inter-vertebral disc with a prosthesis with some success. If the alignment or stability of the cervical vertebral column is disrupted then a fusion or stiffening of the cervical spinal vertebral with a bone graft may be most appropriate.

In summary

- Most bouts of neck pain due to mechanical causes get better within a few weeks.
- Keep your neck stretching, moving, and mobile. Do not let it 'stiffen up'.
- A good posture at work, reading, sitting, driving and at a computer is essential.
- At night adjustment of pillows may help.
- If needed, take NSAID's or painkillers regularly to ease pain.
- Physiotherapy may be advised if the pain does not settle.
- Tell a doctor if symptoms become worse, or new symptoms develop.

Further Patient Information:

<http://orthopaedics.org.uk/index2.php/services/>

Recommended braces, supports, aids, equipment:

<http://orthopaedics.org.uk/index2.php/shop/>

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