

A CYCLIST'S GUIDE TO  
**INJURY  
PREVENTION**

## Neck and shoulder pain

### Exercises to reduce neck tension and stiffness

**NECK OR SHOULDERS** aching during or after a ride? It's important to address the underlying cause. Physio and osteopath *Lewis Wood* explains



**T**ight, shortened neck muscles can cause not only pain and discomfort in your neck, but also tension headaches, numbness in your arms and jaw pain. In fact, problems of this type can even impair your breathing and lead to trapped nerves. The position of your neck when riding is vital for good posture and functional use for the rest of your spine.

One of the most common postural problems is a forward head posture (FHP), which can reduce your lung capacity by up to 30 per cent, by impeding the expansion of the lungs. For every inch too far forward the neck is positioned, the head effectively gains 4.5kg in terms of the forces it applies on the neck. A medium-sized male head weighs around 7.5kg, so the implications are obvious. This is why our deep neck muscles

quickly fatigue when the head is held forward for a long time.

Starting a ride with tight and shortened neck or upper shoulder muscles doesn't bode well. These issues are exacerbated by slouching at work or when driving, sitting poorly on the couch or a poor sleeping posture. While cycling, gravity pulls on your head relentlessly, with your neck taking the strain. It's crucial then that your posture is spot-on. When we lose the proper curvature of the cervical and lumbar curves, we lose as much as 50 per cent of our spinal strength.

**What causes neck stiffness?**

The position of your neck is vitally important to the curves in other areas of your spine; it is a 'central key point' of movement. Most

"Incorrect posture can reduce lung capacity"



**THE EXPERT**

**Lewis Wood**

Sports physiotherapist (BSc Hons, HCPC, MCSP), osteopath (MSc Hons, GOSc, BOA), medical acupuncturist (MAACP, CGIMS), clinical pilates instructor, sports massage therapist (MSMA), and a member of Brighton Mitre [bodyalignclinic.com](http://bodyalignclinic.com)

therapists and instructors attempt to correct postural problems by altering the back, shoulders or pelvis. However, proper alignment of the head is integral to the correct function of the whole spine.

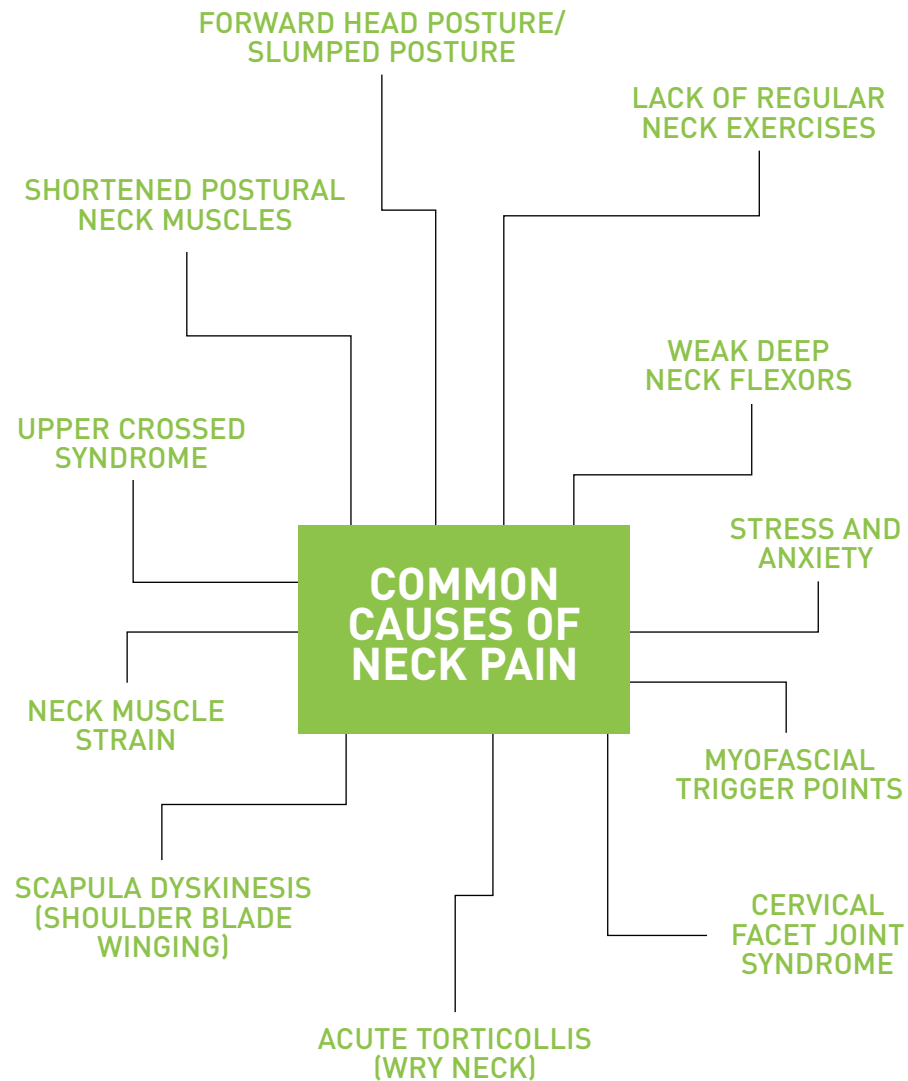
During prolonged sitting, the shoulders soon become rounded as the chest drops. This results in the chin moving forwards. In this position, the trapezius (the main supporting muscle) shortens and the upper neck joints become compressed. As muscles fatigue, nodules or knots form, which can cause pain that may be referred to different areas of the upper back, neck or even face. Once a tender point reaches a certain threshold, referred pain will arise and spread to common areas of discomfort. There are four primary trigger points in the trapezius muscle, where the motor nerve activates the muscle.

There is an increase in discomfort and pain, because proprioceptive signals from your upper neck (first four vertebrae) are a major stimulus point for pain and the body's controlling chemicals, such as endorphins. High levels of stress or anxiety are another cause; it's more than a cliché to point out that many people appear to carry their worries in their shoulders.

Our main supporting neck muscle, the trapezius, is supplied by a cranial nerve, but our other shoulder muscles are supplied by a motor nerve. This may explain why the trapezius muscle instantly tightens when we experience high levels of emotional stress, whereas other shoulder muscles only tighten after prolonged use.

**What is the cervical spine?**

The cervical spine is the upper section of the spine (the neck), comprised of seven vertebral segments. Its primary function is to allow movement of your head and therefore allows fine movements for vision and coordination. The cervical spine is delicate and built for flexibility in all directions, yet its well-engineered structure protects the



spinal cord, existing nerves and vertebral arteries.

A neck joint is known as a facet joint and there is a pair of facet joints at each of the seven neck vertebrae — almost like having two spines in parallel. That's how the segments in your neck allow flexibility but also strength, simultaneously, rather like the links in a bike chain. If one chain link becomes stuck, it needs to be loosened. If a facet joint becomes stiff or immobile, the result is pain and inflammation. This is described as a cervical facet joint strain and is a common cause of neck pain.

**Other well-known causes of neck pain**

You may need to see a medical professional to correctly identify the exact cause of your neck/spine pain or discomfort, but these are common causes.

- Ligamentous sprain
- Whiplash injury
- Traumatic vertebral fracture
- Cervical rib anomaly
- Cervical spondylosis (degenerative neck arthritis)
- Cervical stenosis (narrowing of the spinal cord canal)
- Cervical intervertebral disc bulge/prolapse

a mechanical problem, myofascial massage and trigger-point release therapy may help. Hardened muscle or a protective muscle spasm may be guarding an underlying spinal joint strain or muscle problem. I'd recommend that you see a physiotherapist or osteopath, who'll be able to confirm whether there is a deeper, underlying problem causing your neck discomfort.



**Q** My upper shoulder muscles often feel like bricks, so hard and tense that simple neck stretches don't have any effect. Any advice?

**A** Once your upper trapezius has reached a fully contracted state, it's almost impossible to loosen these muscles by using static neck stretches alone. If it's just

**SELF HELP**

**Self-help exercises to lessen neck tension**

If you suffer with neck stiffness after long rides, try incorporating these four simple, time-efficient exercises into your stretching regime

**SCALENE MUSCLE STRETCH**

Hold for 30sec and repeat 3-4 times.



**UPPER TRAPEZIUS STRETCH**

Hold for 30sec and repeat 3-4 times.



**STRENGTHEN NECK FLEXORS**

Tuck in chin, slowly lift head and hold for up to 5sec. Repeat 8-12 times.



**NECK MASSAGE**

Use a massage stick roller to relax for neck muscle — 2min each side.

