A CYCLIST'S GUIDE TO
INJURY PREVENTION

Mid-back stiffness

Exercises to ease thoracic spine discomfort

GET A STIFF, achy mid-back after long rides? Physio and osteopath *Lewis Wood* addresses the likely causes and suggests preventive measures

During cycling, your mid-back is forced into a rounded posture (excessive kyphosis). On long rides, many cyclists brace on the bars to arch and stretch their mid-back in an attempt to break this static position and give them some short-term relief. This quick change of position gives the rider some short-term relief by briefly shortening the long ligaments that run down the spine before they elongate again.

Why does your mid-back feel stiff after a long ride? When the ligaments and capsules supporting your spinal joints are placed in a compromised position, the abnormal forces cause the ligaments to 'creep', forming new bonds — a phenomenon called hysteresis. Normally the bonds between and within collagen fibres (including displaced water) spring back to their original position, but if you have a slouched posture for a prolonged period, this may not occur. Long-term, this may result in the thoracic spine losing some of its capacity to bear weight while in a stressed position, leading to weakness, which slowly reduces its capacity to cope in the future.

Therefore, correct bike set-up is crucial to avoid excessive strain or postural loading on

"Poor posture can cause ligaments to 'creep'"

THE EXPERT

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your thoracic spine during extended periods of exercise. Your frame size, top tube length, saddle height/position, and stem dimensions must fit you correctly. Before you buy a new bike, it's a good idea to go for a professional bike fit. For more details, visit www.bikefitting.com.

It's also important to hold your posture while riding. Do you regularly exercise or stretch your thoracic spine to prevent aches, discomfort and pains in your back? Researchers have discovered that some people sit for more than 11 hours a day, racking up over 4,000 hours a year! Too much sitting time not only causes spinal joint restrictions and poor posture, but studies have also shown a real link between sitting time and reduced life expectancy. One study suggested that people aged over 45 who sat for 11 hours a day or more were 40 per cent more likely to die prematurely.

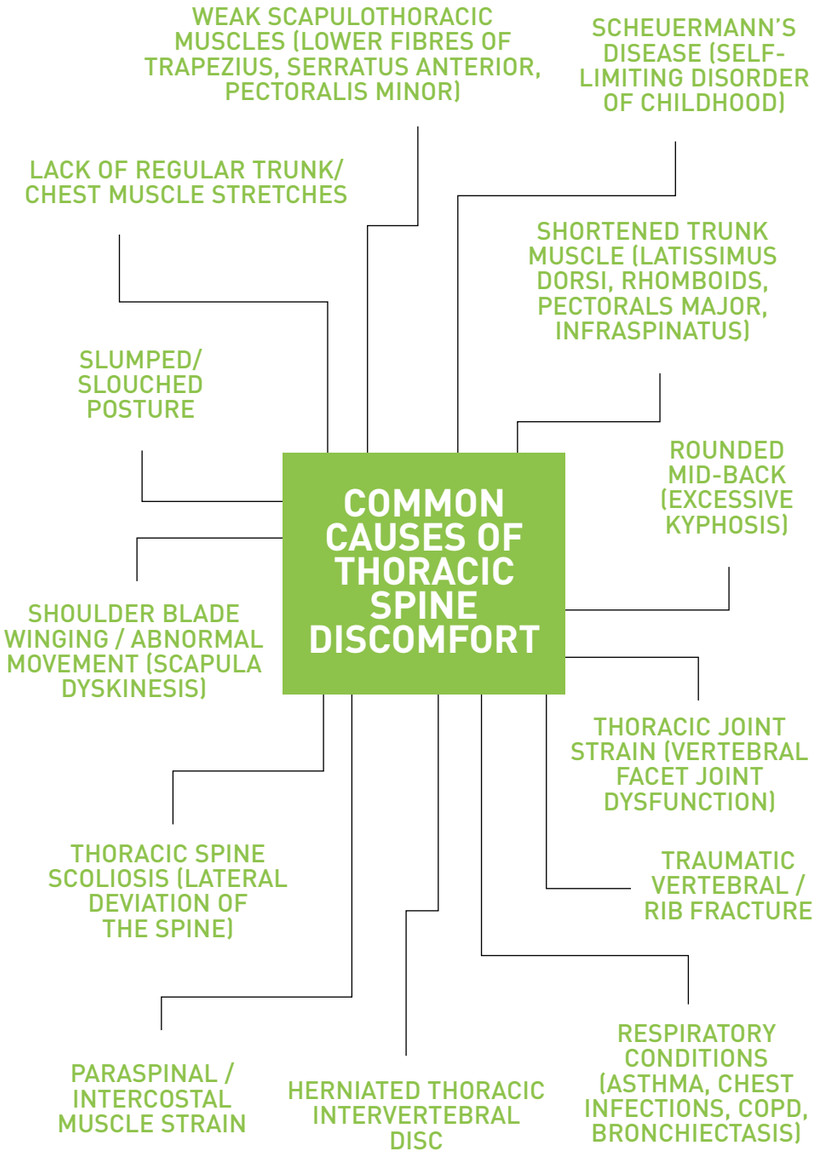
What exactly is your thoracic spine?

The thoracic (dorsal) vertebral column is the middle section of your spine, comprised of 12 vertebral segments and 12 ribs forming your rib cage. These spinal joints are naturally stiff and strong to provide stability, whereas the cervical spine (neck) is 'designed' for flexibility and is capable of twisting 180 degrees, while the lumbar spine is designed for power and strength.

Why is your thoracic spine so important for posture?

Seeing a teenager slouched over a smartphone, you don't have to be an expert to recognise their poor posture; the giveaway is their rounded mid-back. The position of the mid-back is vital to the curvature of the rest of the spine; that's why it's known as a 'central key point' of movement. Lifting, twisting or shifting the centre of your thoracic spine affects the position and postural control of your upper limbs, neck and shoulder girdle. Raising your breast bone elongates your neck/trunk, pulls your shoulders back and activates the stabilising scapula muscles.

If necessary, consult a medical professional to identify the exact cause of your thoracic spine pain. This may require an x-ray or MRI scan. Consult a registered physiotherapist, osteopath, orthopaedic spinal consultant or your local GP for more advice.



Q **After some two-hour rides, I get increasing discomfort in my upper back, sometimes spreading down my arms/forearms. I've had this problem for several years but it's become more frequently recently. Stretches help but only for a few hours, then the pain returns.**

A If simple mid-back stretching exercises only give short-term relief, there may be another as yet undiagnosed cause of your upper thoracic spine pain. There are a number of conditions that can affect the thoracic spine, often due to degenerative changes to spinal joints and intervertebral discs.

I would strongly recommend that you see a physiotherapist or osteopath to ascertain the source of your pain. They may recommend an onward referral to a spinal orthopaedic consultant or medical imaging.

SELF HELP

Self-help exercises to improve your thoracic spine flexibility

Using these self-help exercises may yield immediate benefits and reduce mid-back stiffness. Complete these specific exercises immediately before and after each ride and again 24 hours later

SIDE TRUNK STRETCH

Raise your right arm above your head. Hold your right wrist with your left hand and gently pull your arm upwards. Then bend your trunk forwards and to the left, until a trunk stretch is felt. Hold for 30sec and repeat three or four times on both sides.

FOAM ROLLER MID-BACK

Place the foam roller between your shoulder blades while lying on your back with your knees bent. Interlock your fingers behind your neck. Gently extend backwards over the roller while you exhale. Maintain this position for two seconds and repeat twice for the upper/middle/lower parts of your thoracic spine. Take caution not to over-extend on the foam roller.

MASSAGE SHOULDER BLADE MUSCLE

While standing with your back against the wall, place a tennis ball at the bottom of your right shoulder blade muscle. Put your right arm on to your left shoulder with your left arm crossed on top. Slowly move up and down to massage a small area at a time for up to one minute. Move tennis ball higher and repeat on both sides.