YOUR EXPERT

Sports Injury Fix member **Jo Perkins** is a sports medicine physiotherapist specialising in women's and pelvic health. Jo has a background working in elite professional sport. Based in Cardiff, Jo created **Mumma Physio** (mummaphysio.co.uk) to provide a service which would combine traditional physiotherapy, with sports and pelvic health for both men and women.

CLINIC

Lower back pain is common and often chronic but the good news is that you can usually do something about it and it needn't cause a disruption to your running routine

Lower back pain can be frustrating and debilitating whether before, during or post run. It is actually fairly common but be reassured that, more often than not, episodes of back pain are self-limiting and certainly won't mean the end of your running or race day ambitions.

There are different structures within the back that can be the source of your pain:

- The facet joints that connect the vertebrae can become irritated and inflamed. This is more common in runners with large curves in their lower back (lordosis).
- The discs can be affected by age or injury, potentially leading to sciatica symptoms.
- The lumbar spine muscles can be prone to general muscle tightness, particularly with fatigue or smaller areas known as trigger points which can also refer pain.
- The sacroiliac joints connect the base of the spine to the pelvis. Leg length differences, muscle imbalances or weight bearing can result in pain here.

It's important not to become too focused on the source of the pain however, as the reality is that most low back pain in runners is non-specific and attributable to multiple factors. It's always worth seeing a therapist for an assessment, particularly if you're having sciatica, muscle weakness, changes in sensation or bladder and bowel function.

What are the causes?

- **Muscle weakness or imbalance** – The repetitive ground reaction forces, which can be multiple times a runner's body weight, can put stress on the lumbar spine. We need sufficient muscular support to attenuate these forces. There is a misconception that our 'core' only refers to our six pack, but it is actually the integration of a team of muscles (deeper abdominals, pelvic floor, lower back muscles, diaphragm and gluteals) that support our spine, enabling us to run efficiently. Frequently, our superficial abdominals, quadriceps and hip flexors try and overwork for us, which can affect the pull on your pelvis and strain on your spine.
- **Technique and posture** – Running with your pelvis either too tucked (posterior tilt) or too arched (anterior tilt) can affect the stresses to your lower back. A posterior-tilted pelvis will tighten your hamstrings and limit your hip extension causing your glutes to be less recruited, whereas an anterior-tilted pelvis will lead to hip-flexor tightness, lengthened abdominals and lumbar spine-loading. Many runners hold themselves upright or rigid through their torso, bracing with abdominals, but actually your spine and trunk need to move. Constantly contracting muscles will mean they fatigue, giving you less support.
- **Mobility** – Stiffness in your hips and spine can also predispose you to pain, meaning your muscles and joints don't go through their full range and this can result in weakness and inflammation.
- **Changes in training load/surfaces** – Suddenly increasing your training load can predispose you to any injury, particularly if you don't have sufficient muscle support or suddenly change to harder surfaces such as road running. Or you may find that hill running

Lower back injuries can be extremely debilitating