CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Spinal infection and discitis

What you're feeling

The main symptom of a spinal infection is pain that does not let up. It stays at one level of your spine, most often in the lower back. The area is usually tender to touch, and the muscles around it may spasm. Moving that part of your spine becomes stiff and restricted.

The pain tends to be there most of the time, and it often does not settle with rest. It can be worse at night or when you wake in the morning. Bending, lifting, sitting for long stretches, or carrying shopping can all aggravate it. Some people find it hard to sit through a meal, drive to work, or get through a day of housework without stopping.

There is a reason this condition often takes weeks or months to diagnose. Early on, it can look like ordinary back pain, and you may not have a fever. The average time between the first symptoms and a diagnosis ranges from two to six months. That delay is common, and it is not a sign that your pain is imagined.

Some people also develop problems with the nerves coming from the spine. This can range from pain, numbness or weakness running down an arm or a leg, to trouble controlling your bladder. Around 34 to 40 out of every 100 people with this condition have some nerve-related symptom. If you notice new weakness, numbness, or bladder changes, it needs urgent attention.

You may also feel generally unwell, with tiredness or a mild temperature. Blood tests often show raised markers of inflammation, which is one clue your doctor looks for along with your symptoms.

If any of this sounds familiar, especially pain that will not settle over weeks, it is worth getting checked. Most people with this condition are treated successfully with antibiotics and a back support, without needing surgery.

What's actually happening

A spinal infection is a bacterial infection that settles in one of the building blocks of your spine. It usually starts in a vertebral body, one of the block-like bones stacked on top of each other, or in the disc between two of them. The disc works a bit like a cushion or shock absorber between the bones. It has very little blood supply of its own and gets its nutrients by soaking them up from the bone next door. That same route is how infection

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travels: bacteria in a vertebral body can seep across into the disc and set up what doctors call discitis, an infection of the disc itself.

Most of the time the bacteria arrive through the bloodstream from somewhere else in the body, rather than being introduced directly. The most common culprit is a germ called Staphylococcus aureus, a common skin bacterium. Less often, infection reaches the spine directly, for example through a break in the skin, or as a rare complication of spine surgery or an injection near the spine.

The infection causes swelling and gradual damage to the bone and disc, which is why the pain stays localised, worsens over weeks, and does not settle with rest. As it progresses, the damaged bone can push back into the spinal canal, or pus can collect beside the nerves. That is what produces the nerve symptoms described above, such as leg weakness or bladder changes. A collection of pus near the spinal cord is serious and needs urgent treatment.

The good news is that the spine has a rich blood supply, which helps antibiotics reach the infection. Most people are treated successfully without surgery. Surgery is generally kept for situations where the infection does not respond to antibiotics, where the spine becomes unstable or misshapen, where tissue samples are needed, or where nerves are under threat.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, starts with the least invasive options that suit your condition. Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. Our assessment, including your history, examination and imaging, confirms the diagnosis. Because an infection is an active illness, treatment usually begins straight away rather than with a trial of exercises.

The mainstay of treatment is antibiotics given through a drip, combined with gentle movement. The intravenous antibiotics are typically given for at least 6 weeks, followed by a switch to tablets. You stay up and about during this time rather than resting in bed. A brace or back support is usually fitted as well, to add stability while the bone and disc heal. The type depends on where the infection sits: a lumbar support for the lower back, or a brace that extends over the chest for the middle back. For most people, the right antibiotics plus a back support lead to a satisfactory outcome without surgery.

Surgery is considered when antibiotics have not brought the infection under control, or when new problems appear. The main reasons we operate are nerve problems that are getting worse, pus collecting beside the spinal cord, bone destruction that leaves the spine unstable or bent, ongoing bloodstream infection, or pain that will not settle despite treatment. Sometimes surgery is needed simply to take a tissue sample, when needle biopsies have not identified the germ. About 50 out of every 100 people with this condition ultimately need an operation.

When surgery is needed, the goals are clear: wash out the infected tissue, protect the nerves, and hold the spine steady while it heals. If pus has gathered near the cord, we remove the bone behind it to reach and drain the collection. If bone has been destroyed, we clear it out and rebuild the gap with bone graft or a cage, then place

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screws into the healthy bone above and below to stabilise the spine. Operating also lets us start moving you soon afterwards. We will talk through whether surgery is the right step for you, and what it would involve, before any decision is made.

What to expect

Most people with a spinal infection recover well when it is found and treated. Antibiotics and a back support are enough for the majority, without any operation. The pain usually eases gradually over weeks and months as the infection comes under control and the bone and disc begin to heal. You will stay up and about during treatment rather than resting in bed, and you can expect steady, slow improvement rather than a quick fix.

If surgery is needed, the outlook is also encouraging. People who have surgery early for this condition report less back pain and better day-to-day function a year later than those treated with antibiotics alone. Surgery aims to clear the infection, protect the nerves, and hold the spine steady while it heals, which sets you up for the best recovery possible.

It is honest to say this condition can be serious. Between 2 and 17 out of every 100 people with a bacterial spinal infection do not survive their hospital stay, and the overall death rate has been reported as high as 15 in 100. The risk rises when treatment is delayed, when nerves are affected, or when infection spreads to the chest. This is why doctors take it seriously and why early diagnosis matters.

If it is left untreated, the infection can keep damaging bone and disc. The spine can become unstable or bend out of shape, and pus can collect beside the spinal cord. Nerve problems can become permanent if pressure on the cord is not relieved quickly, because damage to the cord itself cannot be undone. Some infections, such as spinal tuberculosis, can destroy several vertebrae at once and cause lasting deformity.

Some people need a longer course of treatment than others. Diabetes, rheumatoid arthritis, older age, and an infection higher in the spine all make nerve complications more likely. If your symptoms are not improving on antibiotics, or new weakness or bladder changes appear, tell your treatment team straight away. With the right treatment at the right time, most people get back to their normal lives.

When to see someone

See your GP if you have back pain that stays in one spot and will not settle over a few weeks, especially if you feel generally unwell or run a temperature. Ask sooner if you have diabetes, smoke, have had spine surgery or an injection near your spine recently, or have an infection somewhere else in your body.

Go to an emergency department if you develop new weakness, numbness, or trouble controlling your bladder or bowels. These signs mean the nerves or spinal cord are under pressure from the infection or from pus collecting beside it. This needs same-day assessment, because pressure on the spinal cord can cause lasting damage if it is not relieved quickly.

Also seek urgent care if pain becomes severe very quickly, if you cannot bear your own weight, or if you feel hot and shivering with a very painful spine.

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