CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Cauda equina syndrome

What you're feeling

Cauda equina syndrome happens when the bundle of nerves at the base of your spinal cord gets squeezed. These nerves control your bladder, bowel and legs. The warning signs usually come on together, not one at a time.

You will likely have strong back pain with sciatica, which is pain shooting down your leg or legs. It can affect one leg or both. Sitting, bending or coughing often makes it worse. The pain can be bad enough that walking, driving or getting off the toilet becomes hard.

The most important changes are in your bladder and bowel. You may find it hard to start passing urine, or you may not be able to empty your bladder fully. Some people lose the feeling of needing to go at all. You might also notice numbness around your back passage or genitals, or a change in how your bowels work.

These nerve changes can also affect your sex life. Many people continue to have sexual difficulties long after the pressure on the nerves is relieved.

If you cannot pass urine at all, or can only pass small amounts despite feeling full, treat this as an emergency. Go to a hospital emergency department straight away and tell them you are worried about cauda equina syndrome. Doctors can check how much urine is left in your bladder after you try to empty it. A leftover amount of 200 ml or more is a strong warning sign.

You may also notice the symptoms are worse at night or when you first wake up. Long sitting, such as a car trip or a day at a desk, can flare the leg pain. Lying flat with a pillow under your knees sometimes eases it.

This condition is not one you manage at home with rest and painkillers. When the nerve bundle is compressed, the treatment is urgent surgery to take the pressure off. If you have the bladder or numbness changes above, do not wait to see if they settle.

What's actually happening

Your spinal cord runs down your spine and normally ends around the L1-L2 level, in your lower back. Below that point, the nerves continue as a bundle of separate strands fanned out like a horse's tail. Doctors call this bundle the cauda equina. It carries the messages that control your bladder, bowel, sexual function and legs.

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When something presses on this bundle, those messages get blocked. The nerves that tell your bladder it is full and the nerves that control the muscle that empties it come from the same place in your spine. If pressure affects either one, you can lose the feeling of needing to go, or lose the ability to empty properly. The same pressure explains the numbness around your back passage and genitals, and the leg pain and weakness.

The pressure usually comes from a problem in one of the cushions between your back bones. These cushions have a soft, jelly-like centre and a tough outer ring, a bit like a jam doughnut. If the outer ring tears, the soft centre can push backwards into the space where the nerve bundle sits and squeeze it. The squeezing can also come from other causes, such as a narrowing of the tunnel the nerves run through.

This is not like ordinary back pain, where a sore muscle or a worn cushion causes discomfort but nothing is trapped. Here the nerves themselves are being compressed, and they stop working properly while the pressure stays on. That is why the bladder and bowel changes matter more than the pain, and why this condition needs an urgent scan and surgery to take the pressure off rather than rest and painkillers.

What we can do about it

Dr Kieran Hirpara, a spine surgeon at Mater Private Hospital Rockhampton, treats cauda equina syndrome as an emergency that needs surgery rather than a condition to try at home first. 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. At the clinic we take your history, examine you, and arrange the scans needed to confirm the diagnosis.

The main test is an MRI scan, which uses magnets to take detailed pictures of your spine. It shows the discs, the nerves and the tight tunnel they run through far better than a CT scan does. The scan is read alongside your symptoms, not on its own, because a picture alone cannot confirm this condition. If you cannot have an MRI, or the pictures are unclear, a CT myelogram may be used instead. This is a CT scan with dye placed around the nerves to show where the pressure is.

There is no self-management or physiotherapy stage for this condition. When the nerve bundle is squeezed, waiting or exercising will not relieve the pressure, and the bladder and bowel changes can become permanent. That is why we do not offer a trial of rest, painkillers or physiotherapy first.

Surgery is recommended straight away. The operation is called a decompression, which means removing whatever is pressing on the nerves, usually the part of a torn disc that has pushed backwards. The aim is to take the pressure off the nerve bundle quickly so the nerves can recover. Once you are seen, surgery is arranged within days rather than weeks. In one group of patients operated on for a disc pressing on the nerve bundle, the average wait was 1.1 days for the more sudden cases and 3.3 days for the rest. Another group waited between 12 and 164 hours from first symptoms to surgery, averaging about 45 hours. The old idea that surgery must happen within six hours does not hold up, and how quickly someone reached theatre did not decide how well their nerves recovered.

We will talk through the operation with you before it happens, and you can ask questions and share in the decision. Most people who had this surgery for a disc pressing on the nerve bundle regained normal strength in

their legs. The bladder is often the slowest to recover, and some sexual difficulties can continue afterwards. We will discuss what that means for you, and the outlook section below covers recovery in more detail.

What to expect

Recovery from cauda equina syndrome is different for everyone. The nerves can recover, but not always fully, and some changes can stay with you. The outlook depends on how badly the nerves were squeezed and how long the pressure stayed on.

Your legs tend to recover better than your bladder. Most people who had surgery for a disc pressing on the nerve bundle regained normal strength in their legs. The bladder is often the hardest part. It is usually the function most affected before surgery, and it often stays that way afterwards. People whose symptoms came on suddenly tend to have a slightly harder time regaining bladder control than people whose symptoms built up slowly.

The changes that can last are not just about the bladder. Sexual difficulties are common long after the pressure is relieved, and they affect many people over the years that follow. Bladder, bowel and other automatic body functions can also stay affected, even in people with the best starting position for recovery.

If the condition is treated quickly with surgery to take the pressure off, many people recover well. The nerves get a real chance to heal once the squeezing stops. If it is left untreated, the pressure stays on and the nerve damage can become permanent. That is why this condition is treated as an emergency rather than something to wait out.

Recovery is gradual and can take months rather than days. Some functions come back sooner than others, and you may find some improvements continue over a long period. Your care team will monitor your bladder, bowel and leg function as you recover, and can arrange support for any changes that remain, such as help with bladder emptying.

We will talk honestly with you about your own outlook before and after surgery, based on your symptoms and what the scan shows. You will not be left to guess what happens next.

When to see someone

This condition is time-critical. Go to an emergency department if you cannot pass urine at all, or can only pass small amounts despite feeling full. The same applies if you lose the feeling of needing to go, or notice numbness around your back passage or genitals. These are signs the nerve bundle is being squeezed, and they need same-day assessment rather than a GP appointment.

Ask for an urgent specialist review if you have strong back pain with sciatica, which is pain shooting down one or both legs, together with any change in how your bladder or bowels work. Do not wait to see if the symptoms settle. Doctors can check how much urine is left in your bladder after you try to empty it, and arrange a scan of your lower spine.

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