

FACT SHEET — RED FLAG — EMERGENCY

Cauda Equina Syndrome

A spinal emergency — recognising the symptoms and acting immediately

■■ THIS IS A MEDICAL EMERGENCY — Go to A&E; immediately if you have:

- Sudden difficulty controlling your bladder — inability to urinate (retention) or loss of control
- Sudden difficulty controlling your bowel — loss of control or loss of sensation
- Numbness, tingling, or altered sensation in the saddle area — the area between your legs, inner thighs, and perineum
- Rapidly worsening weakness in one or both legs
- These symptoms alongside back pain or sciatica
- Do not wait. Do not sleep on it. Go to A&E; now.

What cauda equina syndrome is

The cauda equina (Latin for "horse's tail") is the bundle of nerve roots at the base of the spinal cord that supplies the bladder, bowel, sexual organs, and lower limbs. When these nerve roots are severely compressed, the result is cauda equina syndrome (CES) — a condition that, if not treated within hours to days, can cause permanent paralysis, loss of bladder and bowel control, and sexual dysfunction.

Cauda equina syndrome is rare — affecting approximately 2–6 per 100,000 people per year. The most common cause is a large central disc herniation at L4/5 or L5/S1, but it can also result from spinal stenosis, tumour, infection, haematoma, or trauma.

The symptoms in detail

CES presents on a spectrum from incomplete (CESI) to complete (CESR). Incomplete CES — where bladder and bowel function are impaired but not lost — is the critical window for intervention. Complete CES with total loss of function carries a poorer prognosis for recovery.

Symptom	What it means
Bladder dysfunction	The most important symptom. Difficulty starting urination, reduced sensation of fullness, urinary retention (unable to pass urine), or urinary incontinence. Retention is more common than incontinence in CES.
Bowel dysfunction	Loss of sensation of needing to defecate, loss of anal tone, faecal incontinence.
Saddle anaesthesia	Numbness or altered sensation in the perineum, inner thighs, buttocks, and genitals — the area that would contact a saddle. This is a highly specific sign.
Bilateral leg symptoms	Pain, tingling, or weakness in both legs simultaneously. Previous unilateral sciatica that becomes bilateral is particularly concerning.
Sexual dysfunction	Altered genital sensation, inability to achieve erection.

What happens at A&E;

If CES is suspected, the following will typically happen:

- **Urgent MRI of the lumbar spine** — the definitive investigation. Available 24/7 at major centres.
- **Bladder scan** — to assess urinary retention.
- **Neurological assessment** — reflexes, power, and sensation in the lower limbs.
- **Emergency spinal surgery** — if CES is confirmed, emergency surgical decompression is performed as soon as possible. The sooner surgery is performed, the better the outcome.

Red flag — always investigate bladder symptoms

Any patient with back pain who develops new urinary symptoms — even if mild, even if they seem unrelated — should be assessed urgently. The most common error in CES management is the failure to investigate early bladder symptoms. If in doubt, go to A&E.;

Recovery

Outcomes depend heavily on the completeness of the syndrome and the speed of surgical intervention. Patients with incomplete CES who receive surgery within 24–48 hours of onset of symptoms generally have a good prognosis for recovery of bladder, bowel, and neurological function. Complete CES with total loss of function carries a more guarded prognosis but surgery is still indicated.

Related fact sheets

Disc herniation	The most common cause of cauda equina syndrome.
Sciatica	Nerve root pain that, in severe cases, can progress to cauda equina involvement.
Spinal metastases	Tumour as a less common cause of cauda equina compression.

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