

### Overview

Cauda equina syndrome (CES) occurs when the nerve roots at the base of the spinal cord are compressed. Known as the *cauda equina* ("horse's tail" in Latin), this bundle of nerves governs the sensation and function of the bladder, bowel, sexual organs and legs. CES is a medical emergency – if treatment is not initiated to relieve pressure on the nerves, function below the waist may be lost.

### Causes & Symptoms

A common cause of CES is injury of a spinal disc on the nerve roots. A spinal disc is a semi-soft mass of tissue that rests between the bones of the spine. These bones are known as the *vertebrae*. The discs act as the spine's shock absorbers. When a disc spills out into the spinal canal, it can press against the bundle of nerves, causing CES. Cauda equina syndrome may also be caused by other factors such as:

- Accident that crushes the spine (ie. a car accident or a fall)
- Penetrating injury (ie. a knife or gunshot wound)
- Arthritis (e.g. *ankylosing spondylitis*)
- Mass lesion (e.g. blood clot)
- Complications from cancer

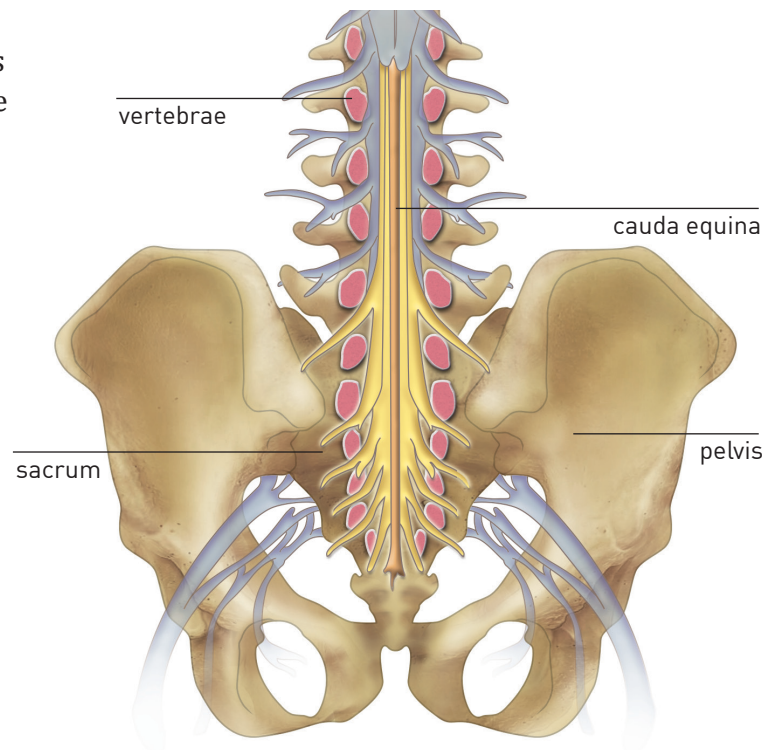
If you have any of these symptoms do not assume it is due to CES. These symptoms may be caused by other conditions. Tell your doctor right away if you have any of these:

- Severe low back pain
- Numbness, tingling in perianal area (called *saddle anesthesia/paresthesia*)
- Inability to urinate, or to hold urine or feces
- Inability to walk, or dragging of foot
- Weakness, loss of sensation, or pain in one or both legs
- Sexual dysfunction (e.g. inability to get an erection in men)

### Risk Factors

These factors increase your chance of developing CES. Tell your doctor if you have any of these risk factors:

- History of back problems (e.g. *lumbar spinal stenosis*)
- Degenerative disc disease
- Birth defects (e.g. narrow spinal canal, *spina bifida*)
- Arteriovenous malformation
- Lesion or tumor affecting the spinal bones or cerebrospinal fluid (CSF)
- Infection affecting the spine
- Severe arthritis



### Diagnosis

A careful evaluation of your medical history and physical examination, including a review of symptoms, will help your Spine Center provider determine if you have Cauda Equina Syndrome. Your provider may also do a neurological exam, which includes testing reflexes, vision, mental status and strength. In addition your provider may order the following tests:

**MRI scan** – A test that uses magnetic waves to take pictures of structures inside the brain and spinal cord.

**CT scan** – A type of X-ray that uses a computer to take pictures inside the head and spinal cord.

**Myelogram** – Imaging test that uses a special dye to view the spinal cord and the area surrounding it.

**Electromyography** – Measures and records the electrical activity of a muscle.

### Treatment

Talk with your doctor about the best treatment plan for you. Treatment options include the following:

**Laminectomy** – Surgical procedure to remove a portion of a vertebra, called the *lamina*.

**Discectomy** – A surgical procedure to remove part of an *intervertebral disc* that is putting pressure on the spinal cord or nerve root.

**Radiation therapy** – If CES is due to cancer, radiation therapy may be an option.

### Follow-Up Care & Care Information

Talk with your doctor about the best treatment plan for you. Treatment options include the following:

Your follow-up care may involve working with a:

- Physical therapist
- Occupational therapist
- Neurologist
- Incontinence specialist or urologist (if you have lost bladder control)

Your doctor may prescribe medication for:

- Pain
- Bladder and bowel difficulties