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Sciatica

Causes

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[Intervertebral disk](#)

Sciatica frequently occurs when a nerve root is compressed in your lower (lumbar) spine — most often as a result of a herniated disk in the low back. Disks are pads of cartilage that separate the bones (vertebrae) in your spine. They keep your spine flexible and act as shock absorbers to cushion the vertebrae when you move.

But as you grow older, the disks may start to deteriorate, becoming drier, flatter and more brittle. Eventually, the tough, fibrous outer covering of the disk may develop tiny tears, causing the jelly-like substance in the disk's center to seep out (herniation or rupture). The herniated disk may then press on a nerve root, causing pain in your back, leg or both. If the damaged disk is in the middle or lower part of your back, you also may experience numbness, tingling or weakness in your buttock, leg or foot.

Although a herniated disk is by far the most common cause of sciatic nerve pain, other conditions can also put pressure on the sciatic nerve, including:

- **Lumbar spinal stenosis.** Your spinal cord is a bundle of nerves that extends the length of your spine. It's housed inside a channel (spinal canal) within the vertebrae. Thirty-one pairs of nerves branch off from the spinal cord, providing communication between your brain and the rest of your body. In spinal stenosis, one or more areas in the spinal canal narrow, putting pressure on the spinal cord or on the roots of the branching nerves. When the narrowing occurs in the lower spine, the lumbar and sacral nerve roots may be affected.
- **Spondylolisthesis.** This condition, often the result of degenerative disk disease, occurs when one vertebra slips slightly forward over another vertebra. The displaced bone may pinch the sciatic nerve

where it leaves the spine.

- **Piriformis syndrome.** Running directly above the sciatic nerve, the piriformis muscle starts at your lower spine and connects to each thighbone (femur). Piriformis syndrome occurs when the muscle becomes tight or goes into spasms, putting pressure on the sciatic nerve. The pain may radiate down the back of your thigh but doesn't extend below the knee. Active women — runners and serious walkers, for example — are especially likely to develop the condition. Prolonged sitting, car accidents and falls also can contribute to piriformis syndrome.
- **Spinal tumors.** In the spine, tumors can occur inside the spinal cord, within the membranes (meninges) that cover the spinal cord, or in the space between the spinal cord and the vertebrae — the most common site. As it grows, a tumor compresses the cord itself or the nerve roots. This can cause severe back pain that may extend to your hips, legs or feet; muscle weakness and a loss of sensation, especially in your legs; difficulty walking; and sometimes loss of bladder or bowel function.
- **Trauma.** A car accident, fall or blow to the spine can injure the lumbar or sacral nerve roots.
- **Sciatic nerve tumor or injury.** Although this doesn't occur often, the sciatic nerve itself may be affected by a tumor or injury.
- **Other causes.** In some cases, your doctor may not be able to find a cause for your sciatica. A number of problems can affect the bones, joints and muscles, all of which could potentially result in sciatic pain.

[By Mayo Clinic Staff](#)

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