



Radiculopathy, Radiculitis and Radicular Pain

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From top to bottom down the entire length of the spine, at each spinal level nerves exit through holes in the bone of the spine (foramen) on the right side and left side of the spinal column. These nerves are called *nerve roots*, or *radicular nerves*. They branch out at each level of the spine and innervate different parts of our body.

For example, nerves that exit the [cervical spine](#) travel down through the arms, hands, and fingers. This is why neck problems that affect a cervical nerve root can cause pain and other symptoms through the arms and hands (radiculopathy), and low back problems that affect a lumbar nerve root can radiate through the leg and into the foot (radiculopathy, or sciatica), thus prompting [leg pain](#) and/or [foot pain](#).

See [Cervical Radiculopathy Symptoms](#)

As mentioned earlier, there is no spinal cord in the lumbar spine. Because of this, and because the spinal canal is usually fairly spacious in the low back, problems in the [lumbosacral region](#) (the lumbar spine and sacral region of the spine) usually cause nerve root problems, not spinal cord injury. Even serious conditions such as a large disc herniation or fracture in the low back are less likely to cause permanent loss of motor function in the legs (paraplegia, or paralysis).

The nerve roots are named for the level of the spine at which they exit. However, nerve roots are not labeled consistently throughout the length of the spine.

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- **In the cervical spine**, the nerve root is named according to the *LOWER* spinal segment that the nerve root runs between. For example, the nerve at the C5-C6 level is called the C6 nerve root.

It is named this way because as it exits the spine the nerve root passes **OVER** the C6 pedicle (a piece of bone that is part of the spinal segment).

- See more about [Cervical Radiculopathy](#).

- **In the lumbar spine**, the nerve roots are named according to the *UPPER* segment that the nerve runs between. For example, the nerve root at the L4-L5 level is called the L4 nerve root.

The nerve root is named this way because as it exits the spine it passes **UNDER** the L4 pedicle (a piece of bone that is part of the spinal segment).

- See more about [Lumbar Radiculopathy](#).



Lumbar Spine Anatomy Video

The area that the naming change occurs is at the **C7-T1 level** (Thoracic 1), meaning that there are 8 cervical nerve roots and only seven [cervical vertebrae](#). Here, the C8 nerve exits **UNDER** the C7 vertebra and **OVER** the T1 vertebra. From this point down through the upper back, lower back and sacral region, the nerve is named for the upper segment of the spine that the nerve root runs between (and the pedicle it passes **UNDER** as it exits the spine).

- See [All about the C6-C7 Spinal Segment in the Neck](#)

This is part of the picture. However, the doctor may still say that you have a problem with the L5 nerve root at the L4-L5 level. Since we just explained that the L4 nerve root exits at the L4-L5 level, this sounds like a contradiction. However, both statements are correct, and can be explained by the fact that there are two nerve roots at each level.

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Two Nerve Roots at Each Level

It should be mentioned that two nerves cross each disc level and only one exits the spine (through the foramen) at that level.

- **Exiting nerve root.** The nerve root that *exits* the spine at a particular level is referred to as the “exiting” nerve root.

Example: The L4 nerve root exits the spine at the L4-L5 level.

- **Traversing nerve root.** Another nerve root *goes across* the disc and exits the spine at the next level below. It is called the “traversing” nerve root.

Example: The L5 nerve root is the traversing nerve root at the L4-L5 level, and is the exiting nerve root at the L5-S1 level.

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A lot of confusion occurs because when a nerve root is compressed by disc herniation or other cause, it is common to refer both to the intervertebral level (where the disc is) and to the nerve root that is affected. Depending on where the disc herniation or protrusion occurs, it may impinge upon either the exiting nerve root or the traversing nerve root. For example:

When the traversing nerve root is affected

Lumbar radiculopathy. In the lumbar spine, there is a weak spot in the disc space that lies right in front of the traversing nerve root, so lumbar discs tend to herniate or leak out and impinge on the traversing nerve root. For example, a typical posterolateral (behind the disc and to the side) lumbar disc herniation at the L4-L5 level often affects the nerve that traverses the L4-L5 level and exits at the L5 level, called the L5 nerve root.



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When the exiting nerve root is affected

Cervical radiculopathy The opposite is true in the neck. In the cervical spine, the disc tends to herniate to the side (laterally), rather than toward the back and the side (posterolaterally). If the disc material herniates to the side, it would likely compress the exiting nerve root. For example, the C6 nerve root would be affected at the C5-C6 level (because in the neck the exiting nerve root is named for the level below it).

[Cervical
Radiculopathy
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Radiculopathy and Sciatica

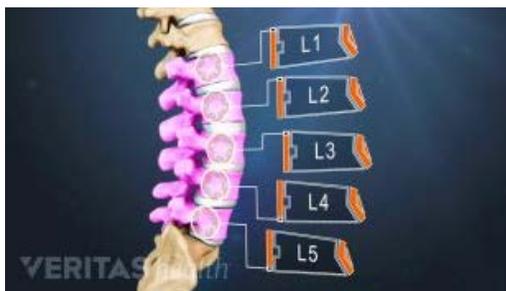
Another word for the nerve root is "radicular nerve", and when a herniated disc or prolapsed disc presses on the radicular nerve, this is often referred to as a radiculopathy. Thus, a physician might say that there is herniated disc at the L4-L5 level, creating an L5 radiculopathy or an L4 radiculopathy, depending on where the disc herniation occurs (to the side or to the back of the disc) and which nerve root is affected. The lay term for a radiculopathy in the low back is sciatica.

- See [What You Need to Know About Sciatica](#)

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Lumbar Radiculopathy

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