

Radiculopathy

Doctors use the term radiculopathy to specifically describe pain, and other symptoms like [numbness, tingling, and weakness](#) in your arms or legs that are caused by a problem with your nerve roots. The nerve roots are branches of the spinal cord that carry signals to the rest of the body at each level along the spine. This term comes from a combination of the Latin word "radix," which means the roots of a tree, and the Latin word "pathos," which means a disease. This disease is often caused by direct pressure from a [herniated disc](#) or [degenerative changes](#) in the lumbar spine that cause irritation and inflammation of the nerve roots. Radiculopathy usually creates a pattern of pain and numbness that is felt in your arms or your legs in the area of skin supplied by the sensory fibers of the nerve root, and weakness in the muscles that are also supplied by the same nerve root. The number of roots that are involved can vary, from one to several, and it can also affect both sides of the body at the same time.

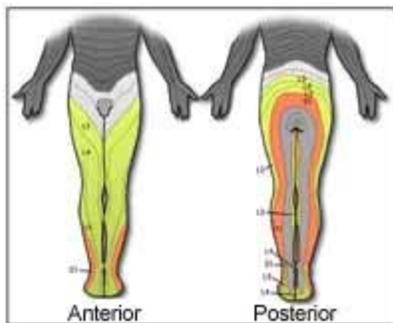


Illustration of the dermatomal distribution of the nerve roots. On sensory and motor neurological examination, the offending nerve root can often be identified by the distribution of symptoms and signs.

Symptoms

The most common symptom of lumbar radiculopathy is [sciatica](#). This is a pain that radiates from your back into your buttocks, and down your legs to the feet. Sensory symptoms are more common than motor symptoms, and muscle weakness is usually a sign that the nerve compression is more severe. The quality and type of pain can vary, from dull, aching, and difficult to localize, to sharp, burning, and easy to pinpoint. Radiculopathy can create hypersensitivity to touch as well as numbness in the area of skin that is supplied by the nerve root. Symptoms such as numbness and tingling, and especially weakness in your leg muscles in the presence of [back pain](#) are warning signs that your problem may be more serious and you should see a doctor.

Diagnosis

There are several different causes of radiculopathy, but the correct diagnosis of the cause of your symptoms begins with a complete physical examination of the entire body, with special emphasis on the back and lower extremities. Your doctor will examine your back for flexibility, range of motion, and the presence of certain signs that suggest that a

particular nerve root is being affected. This often involves testing the strength of your muscles and checking your reflexes to make sure that they are still working normally. You will often be asked to fill out a diagram that asks you where your symptoms of pain, numbness, tingling and weakness are occurring.

A routine set of x-rays is also usually ordered when a patient with back pain goes to see a doctor. An MRI scan or a CT scan (CAT scan) can also be part of the evaluation for the causes of radiculopathy. An MRI scan is very useful for determining where the nerve roots are being compressed because this type of a scan is designed to show the details of soft-tissue structures, like nerves and discs. A CT scan is often used to evaluate the bony anatomy in the lumbar spine, which can show how much space is available for the nerve roots. The nerve roots exit the spinal canal through a bony tunnel called the neuroforamen, and it is at this point that the nerve roots are especially vulnerable to compression.

In many instances, A CT scan or an MRI is often not ordered until a decision has been made to proceed with surgery. This is because scientific studies show many people with "normal" backs have evidence of significant intervertebral disc herniations on MRI scans that could be held responsible for nerve root compression, and yet these people do not have any symptoms of back pain. Therefore, MRIs are usually ordered only when the diagnosis is unclear, or after it becomes apparent that the patient is not going to get better with non-surgical options and the surgeon needs to determine what type of surgery is best to relieve the symptoms.

Treatment

Your doctor will be able to discuss with you what your diagnosis means in terms of treatment options. For most people who do not have evidence of nerve root compression with muscle weakness, the first line of therapy includes non-steroidal anti-inflammatory drugs, rest, and [physical therapy](#). A soft back brace or lumbar support is often prescribed in order to allow the back to have a chance to rest.

[Surgery](#) for radiculopathy is offered as an early option for people who have evidence of muscle weakness that is being caused by nerve root compression. This is because muscle weakness is a definite sign that the nerves are being injured (more seriously than when pain is the only symptom) and relieving the pressure on the nerves can be more of a priority. In most other situations, surgery is offered only after [physical therapy](#), rest, and [medications](#) have failed to adequately relieve the symptoms of [pain](#), numbness and weakness over a significant period of time.