

## **Radiculopathy**

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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 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 sensory fibers of the nerve root, and weakness in the muscles that are also supplied by the same nerve root.

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.

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.

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.

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.

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