

# Radiculopathy

Radiculopathy is a clinical condition in which [dysfunction](#) of one or more [nerves](#) occurs due to mechanical [compression](#) and/or chemical [irritation](#) of the [nerve roots](#). Most often located in the [lumbar spine](#), [radiculopathy](#) remains one of the most common complaints in primary health. Some patients responded well to [conservative treatment](#). However, those who show no improvement may benefit from more invasive treatment options, such as intravenous [corticosteroids](#), spinal [injections](#), and surgical [procedures](#).

Radiculopathy: pain and/or subjective sensory changes ([numbness](#), [tingling](#)...) in the distribution of a [nerve root dermatome](#), possibly accompanied by [weakness](#) and [reflex](#) changes of [muscles](#) innervated by that [nerve](#) root.

The emphasis is on the nerve root (radix = "root").

In a radiculopathy, the problem occurs at or near the root of the nerve, along the spine. However, the pain or other symptoms often radiate to the part of the body served by that nerve. For example, a nerve root impingement in the neck can produce pain and weakness in the forearm. Likewise, an impingement in the lower back or lumbar-sacral spine can be manifested with symptoms in the foot.

The radicular pain that results from radiculopathy should not be confused with referred pain, which is different both in mechanism and clinical features.

## Classification

[Refractory Radiculopathy](#)

[Polyradiculoneuropathy](#).

see [Cervical radiculopathy](#)

see [Lumbar radiculopathy](#).

Ito O, Nishimura A, Ishido K, Hitotsumatsu T. Spontaneous [vertebral arteriovenous fistula](#) manifestating as [radiculopathy](#). No Shinkei Geka. 2011 Aug;39(8):775-81. Japanese. PMID: 21799228.

## Diagnosis

### General principles

- If a reliable [motor exam](#) can be done, the [EMG](#) will not likely add any information. A normal motor exam will usually be associated with a normal EMG
- EMG is not extremely sensitive for radiculopathy (e.g. especially with sensory-only radiculopathy, which is more common in the cervical region than lumbar). However, when abnormal, EMG is very specific

- EMG is best reserved for cases with documented weakness where additional localizing or prognostic information is needed, or when the patient's strength cannot be reliably assessed (inability to cooperate, functional overlay...)

- Timing

- it takes about 3 weeks after onset of radiculopathy for the EMG to reliably show any findings
- "acute changes" begin at about 3 weeks and can last up to about 6 months
- chronic changes can be seen starting at about 6 months, and may persist indefinitely

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