
Cervical Radiculopathy

Cervical radiculopathy is the clinical description of pain and/or neurological symptoms resulting from any type of condition that irritates a nerve in the cervical spine (neck).

The cervical spine is delicate—housing the spinal cord that sends messages from the brain to control all aspects of the body—while also remarkably strong and flexible, allowing movement in all directions. It performs several crucial roles, including housing and protecting the spinal cord, supporting the head and its movement, and facilitating flow of blood to the brain.

Cervical nerve roots, named C1 through C8, exit the cervical spine above the designated vertebral level at all levels except the last one (C8 exits below the C7 vertebra). These cervical nerves then branch out to supply muscles that enable functioning of the shoulders, arms, hands, and fingers. They also carry sensory fibers to the skin that provide sensation.



When any nerve root in the cervical spine is irritated through compression or inflammation, symptoms of pain, tingling, numbness, and/or weakness can radiate anywhere along that nerve's pathway into the shoulder, arm, and/or hand.

Cervical radiculopathy symptoms most commonly appear intermittently at first—coming and going—but they could also develop suddenly or gradually.

Causes of Cervical Radiculopathy: Any condition that somehow compresses or irritates a cervical nerve can cause cervical radiculopathy. The most common causes include:

- **Cervical Herniated Disc.** If the inner material of the cervical disc leaks out and inflames or impinges the adjacent nerve, it can cause cervical radiculopathy. If a younger person (20s or 30s) has cervical radiculopathy, the most likely cause is a herniated disc.
- **Cervical Spinal Stenosis.** As part of the degenerative process of the cervical spine, changes in the spinal joints can lead to tightening of the space for the spinal canal. Spinal stenosis is a common cause of cervical radiculopathy symptoms in people over age 60.
- **Cervical Degenerative Disc Disease.** When a disc in the cervical spine degenerates, the disc becomes flatter and stiffer and does not support the spine as well. In some

people this degenerative process can lead to inflammation or impingement of the nearby nerve root. Cervical degenerative disc disease is a common cause of radiculopathy in people over age 50.

Cervical Radiculopathy Treatment: There is a wide range of treatment options available for cervical radiculopathy. The treatment will depend mainly on the underlying cause of the patient's symptoms as well as the severity of symptoms.

Nonsurgical treatments could include some combination of the following:

- **Rest or activity modification.** Oftentimes cervical radiculopathy resolves on its own, especially if the symptoms are minor. Limiting strenuous activities, like sports or lifting heavy objects, or using better posture while sitting or driving might be all that is needed.

- **Physical therapy.** An exercise and stretching routine might help relieve symptoms. A physical therapist or other certified medical professional can develop a plan that is specific for the patient.

- **Ice and/or heat therapy.** Applying an ice pack or a heated gel pack to the neck might offer pain relief for some people. For example, applying cold therapy after an activity-related flare-up of pain is often helpful in reducing inflammation and pain.

- **Pain management with medication or injections.** Various pain blockers and anti-inflammatories are available to reduce symptoms of pain. Over-the-counter (OTC) medications, such as aspirin, acetaminophen, or ibuprofen could likely be tried first. If OTC medications do not provide the patient relief, prescription-strength medications, such as muscle relaxants or opioids, could be prescribed by the doctor on a short-term basis. Another option could be an injection carefully placed with X-ray guidance to deliver medication directly into the cervical spine, such as a cervical epidural steroid injection.

- **Manual manipulation.** A chiropractor or other qualified health professional can manually adjust the cervical spine with the goal of improving mobility and providing a better healing environment. Sometimes manual manipulation is part of a physical therapy program.

This is not a complete list of treatments for cervical radiculopathy. For instance, some people might also experience relief from treatments such as massage or traction, and certainly many people find optimal relief with a combination of treatments rather than a single approach.

For example, a cervical epidural steroid injection may provide acute pain relief that is sufficient to allow the patient to make progress with physical therapy for longer term pain relief.

When Surgery is Considered. If nonsurgical treatments are not providing pain relief from cervical radiculopathy, or if neurological symptoms of arm or hand numbness and weakness continue to progress, surgery may be considered.

Read more about cervical radiculopathy at spine-health.com