

Oral steroids for acute sciatica produce limited improvement in function and pain

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Among patients with acute sciatica caused by a herniated lumbar disk (a condition also known as "acute radiculopathy"), a short course of oral steroids resulted in only modest improvement in function and no significant improvement in pain, according to a study published today in the *Journal of the American Medical Association*.

Acute sciatica, characterized by radiating buttock and leg pain, is most frequently associated with a herniated disk in the lower (lumbar) spine, and occurs in more than one in 10 people sometime in their lives.

Although [oral steroids](#) are used by many physicians and have been included in some clinical guidelines, no large-scale clinical trials of oral steroids for sciatica have been conducted before.

"These findings suggest that a short course of oral steroids (prednisone) is unlikely to provide much benefit for patients with sciatica due to a herniated disk in the lower back," said lead author Harley Goldberg, DO, a spine care specialist at Kaiser Permanente's San Jose Medical Center. "Despite its widespread use, we found that oral steroid treatment for acute sciatica is only modestly effective for improving function and is ineffective for reducing pain."

To determine if oral prednisone is more effective than a placebo in improving function and pain among patients with acute sciatica, the physician-researchers at the Kaiser Permanente Northern California Spine Centers and the Division of Research conducted a randomized, double-blind, placebo-controlled clinical trial from 2008 to 2013. Study

participants were 269 adults with radicular pain persisting three months or less, functional impairment with a score of at least 30 on the widely used Oswestry Disability Index score (which ranges from 0-100, with higher numbers indicating greater dysfunction), and a herniated disk confirmed by magnetic resonance imaging.

Study participants were given either a tapering 15-day course of oral prednisone or a placebo. The prednisone-treated group showed a small but greater likelihood of achieving at least a 30-point or 50 percent improvement in function at 3 weeks and at 52 weeks. However, there was no statistically significant difference between groups in changes in pain at either the 3-week or 52-week time points.

"Whether the small improvement in function—without a subsequent improvement in pain—merits use of oral steroids for patients with sciatica is a difficult decision and, ultimately, becomes a personal one that must be weighed by individual patients and their care providers," noted senior author Andrew Avins, MD, MPH, a senior scientist at the Division of Research. "The value of this type of research is in providing the information necessary for physicians and their patients to have a meaningful discussion of the benefits and risks."

Acute sciatica associated with a herniated disk commonly causes substantial pain and disability and generates significant costs. Currently used treatment options include advice, education, self-care, and medications (including oral steroids), followed by various physical modalities, epidural steroids, and surgery (microdiscectomy) if [pain](#) persists.

The researchers found that oral steroids did not reduce the likelihood of undergoing surgery in the year following steroid treatment. They also found no evidence for substantial improvements in other measures of quality of life. "More work is needed to identify which [patients](#) will have

significant benefit from non-invasive therapies for acute radiculopathy associated with a herniated lumbar disk," noted Dr. Goldberg.

More information: *Journal of the American Medical Association*, [DOI: 10.1001/jama.2015.4668](https://doi.org/10.1001/jama.2015.4668)

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