

Comparing the Effectiveness of Nonsurgical Treatments for Lumbar Spinal Stenosis in Reducing Pain and Increasing Walking Ability

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What was the research about?

Lumbar spinal stenosis is a health problem that is common in older adults. In people with this health problem, the space between vertebrae in the spine narrows. This narrowing can cause pressure on the nerves in the lower back, which can cause pain and can make it difficult to walk. Doctors often recommend spine surgery to improve symptoms. But many people prefer to avoid back surgery if they can.

In this study, the research team wanted to see if treatments that don't involve surgery helped improve patients' symptoms. The team compared three types of treatment. These treatments were pain medicine, group exercise classes, and chiropractic plus physical therapy.

What were the results?

- Two months after the study started, patients in all three groups saw improvement in pain and physical function. Compared with patients who exercised or used pain medicine, those who had chiropractic and physical therapy had more improvement in pain. Patients who exercised and patients who used pain medicine showed the same amount of improvement in pain. All three groups had the same improvement in walking ability.

- All three groups showed the same improvement in pain and walking ability six months after the study started.
- Patients who exercised had more daily activity compared to patients who took medicine two months after the study began. However, these improvements didn't last when the team looked at daily activity again at six months.

Who was in the study?

The study included 259 patients with lumbar spinal stenosis that led to difficulty walking. To be in the study, patients had to be age 60 or older, able to walk at least 50 feet without help, and able to do light exercise. Patients lived in Pittsburgh, Pennsylvania. About the same number of men and women were in the study. In addition, 77 percent of patients were white, 22 percent were black, and 1 percent were other races. The average age was 72. About half of patients had a college degree.

What did the research team do?

The team assigned patients to one of three groups by chance. Each group received treatment for six weeks. One group received pain medicine and met with a doctor three times. The doctor prescribed more pain medicine if needed. If the medicine didn't help enough, the doctor prescribed steroid injections. Patients in the second group took two group exercise

classes per week at local senior centers. In the third group, patients got two chiropractic and physical therapy treatments per week at a health clinic. The research team gave all the patients armbands that measured their daily activity.

Doctors, senior center directors, and patients with experience with lumbar spinal stenosis gave input on the study design.

What were the limits of the study?

Some patients took off the armband used to measure daily activity because it wasn't comfortable. The results may have been different if all patients wore the armband all the time. Also, the walking test only tested

patients' ability to walk on flat surfaces. For patients who need to walk up hills or stairs, the results may not be helpful.

Future studies could test combinations of the treatments used in this study. Studies could also test the effect of using these treatments for a longer time.

How can people use the results?

Doctors can use the results from this study to help patients decide on nonsurgical treatment options for lumbar spinal stenosis.

To learn more about this project, visit pcori.org/Schneider075.