

Patients with chronic pain used less sick leave after spinal cord stimulation

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People with long-term neuropathic pain took significantly fewer sick days from work after treatment with spinal cord stimulation, according to a study by researchers at Karolinska Institutet published in the journal

Pain. The findings suggest that the treatment has the potential to increase life quality for chronic pain patients and reduce costs to society, the researchers say.

Chronic pain has a large impact on the patients' quality of life and health, but also on societal costs since the condition can lead to significant absence from work. For patients with severe, chronic [neuropathic pain](#) that hasn't been helped by other treatments, electric stimulation of the spinal cord could be an option. Spinal cord stimulation involves placing electrodes in the spinal canal creating impulses that disrupts pain signals as they travel to the brain.

Researchers at Karolinska Institutet used national registry data to study more than 1,000 patients treated with [spinal cord stimulation](#) in Sweden between 2006 and 2017 and compared their sick leave two years before and two years after the treatment. A reference group was included to control for societal changes that may impact the sick leave rate, such as unemployment and changes in the social security system.

"The average number of sick leave days prior to treatment was very high, about 200 days per year, which indicates a significant burden on the patient but also on society at large in terms of productivity loss," says Emma Söreskog, affiliated to teaching/tutoring at the Department of Learning, Informatics, Management and Ethics (LIME), Karolinska Institutet, and the study's first author. "After treatment with spinal cord stimulation, the average patient had 21 fewer sick leave days per year."

The number of sick leave days varied substantially by gender, age, and socioeconomic factors and comorbidities, but the effect of treatment was not dependent on these factors.

Chronic pain is one of the most common reasons for primary care visits and sick leave. The societal cost of [chronic pain](#) in Sweden has been

estimated to 10 billion Euro per year, of which 9 billion consists of [indirect costs](#) related to work absence.

"The next step is to study care pathways for patients with chronic pain in Sweden and what societal costs these are associated with," says co-author Niklas Zethraeus, senior researcher at the Department of Learning, Informatics, Management and Ethics (LIME), Karolinska Institutet. "We also need to analyze the cost-effectiveness of the treatment. This information is expected to contribute with better information for decision-making for treatment guidelines, recommendations, and priorities with the aim of using effective and cost-effective treatment strategies for patients with chronic pain."

A limitation of the study is that shorter periods of [sick leave](#), less than 14 days, weren't included since these aren't registered by the Swedish Social Security Agency. The results are based on Swedish data and may not apply directly to other countries.

More information: Emma Söreskog et al, Impact of Spinal Cord Stimulation on Sick Leave and Disability Pension in Patients with Chronic Neuropathic Pain: A Real-world Evidence Study in Sweden, *Pain* (2022). [DOI: 10.1097/j.pain.0000000000002756](https://doi.org/10.1097/j.pain.0000000000002756)

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