

# Lack of belief in body's ability to function through pain linked to daily pre-spine-surgery prescribed opioids

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According to a new Johns Hopkins Medicine study, low pain self-efficacy can predict daily pre-surgery prescribed opioid use among patients seeking elective spine surgery.

The study defined [pain self-efficacy](#) as the "beliefs held by people with [chronic pain](#) that they can carry out certain activities, even when experiencing pain." [Previous studies](#) showed that lower pain self-efficacy is associated with higher pain intensity and greater pain interference in day-to-day life.

However, the Johns Hopkins research team believes its study is among the first to investigate pain self-efficacy's correlation with daily preoperative prescribed [opioid](#) consumption. The study was published by *The Spine Journal*.

Patients having spine [surgery report](#) higher levels of pre-surgery prescribed opioid use than patients having any other surgical procedure. Additionally, [past studies](#) found that, among patients seeking elective spine surgery, sustained preoperative opioid use is a major predictor of persistent postoperative opioid use.

This is significant because post-surgery dependence on opioids can lead to worse health outcomes, such as persistent pain and increased risk of opioid misuse. Therefore, it is crucial for surgeons to identify candidates for spine surgery who have a high likelihood of using daily prescribed opioids prior to their surgery.

"We were curious if pain self-efficacy could predict daily preoperative prescribed opioid consumption," says Richard Skolasky Jr., Sc.D., M.A., senior author of the study and director of the Johns Hopkins Spine Outcomes Research Center. "We figured if the two were related, low pain self-efficacy scores could serve as a modifiable target to reduce postoperative opioid use—and thus improve postoperative outcomes."

For the study, the team recruited 578 patients—all from a single Johns Hopkins tertiary-care hospital—who had elective spine surgery between August 2020 and December 2021. Nearly half of the participants were

women, and the mean age was 55. Before surgery, the participants completed the Pain Self-Efficacy Questionnaire (PSEQ).

Developed in the 1980s by Australian psychologist Michael Nicholas, Ph.D., the PSEQ asks questions about the patient's confidence in performing tasks independently despite pain. Higher scores indicate greater pain self-efficacy, with 60 being the highest possible score.

The research team found that spine surgery candidates with a PSEQ score of less than 22 were twice as likely to engage in daily preoperative prescribed opioid use—even when controlling for pain and disability. This suggests that pain self-efficacy could serve as a measure to assess a patient's likelihood of daily pre-surgery [opioid use](#).

"Based on our findings, we believe [orthopaedic surgeons](#) can use pain self-efficacy scores to identify patients who are likely to be using prescribed opioids daily before surgery," says Skolasky. "Surgeons can help these patients improve their pain self-efficacy scores through education and counseling prior to surgery. This can strengthen the patients' ability to cope with pain, reduce their usage of opioid medications and consequently improve their postoperative quality of life."

The Johns Hopkins team plans to continue researching how pain self-efficacy relates to outcomes for patients having [spine](#) surgery, including other factors that can hinder postoperative recovery.

**More information:** Kevin C. Mo et al, Pain Self-Efficacy (PSEQ) score of

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