

Scientist finds higher opioid doses associated with increase in depression

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Jeffrey Scherrer, Ph.D. Credit: Saint Louis University

Patients who increased doses of opioid medicines to manage chronic pain were more likely to experience an increase in depression, according to Saint Louis University findings in *Pain*.

The study, "Change in [opioid](#) dose and change in [depression](#) in a longitudinal primary care patient cohort," appears in the February 2015 edition of the journal. The study expands the authors' findings in a previous study of Veterans Administration (VA) [patients](#).

Jeffrey Scherrer, Ph.D., associate professor for family and community medicine at Saint Louis University, and his colleagues studied questionnaires from 355 patients from nine practices in the Residency Research Network of Texas who reported chronic low back [pain](#) initially and at one-year and two-year follow ups. The respondents to the survey were 72.4 percent female, older than 46 (75.2 percent) and mostly of Hispanic or African-American descent (57.5 percent).

The patients reported the number of years they had been experience [chronic pain](#).

"Better understanding of temporal relationship between opioids and depression and the dose of opioids that places patients at risk for depression may inform prescribing and pain management and improve outcomes for patients with chronic, non-cancer pain," the study found.

Previous research had found depression to be linked with patients' opioid use, but this study has identified the association between an increase in opioid use and an increase in depression.

Contributing factors for cases of new-onset depression, according to this study and previous research conducted by Scherrer, may include both the amount of daily morphine exposure and the duration of exposure. The study calls for further study to determine whether patients are at-risk due to past episodes of depression or recent depressive symptoms.

Scherrer noted that since the acceptance of the paper his team has continued to analyze a large Veterans Administration medical record data base.

"After the paper was accepted at *Pain*, we have been conducting on-going additional analysis, with the support of NIH funding (R21 MH101389) of a large VA patient data base to determine if duration of

opioid use and dose of opioid interact or have an additive effect on risk of depression. Our results support the conclusion that most of the risk of depression is driven by the duration of use and not the dose," Scherrer said.

"Thus, a strong potential explanation of our finding that increasing opioid dose increases risk of depression could be that the patients who increase dose were the longer using patients. This is logical as longer use is associated with tolerance and a need to increase opioids to achieve pain relief."

"We hope to find risk factors such as [opioid misuse](#) that could be in the pathway from chronic opioid use to new onset depression," Scherrer said. "This would expand the targets for intervention to limit the risk of depression in patients who need long-term opioid therapy."

Provided by Saint Louis University

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