

# Long-term use of prescription-based painkillers increases the risk of depression, researcher finds

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Opioid analgesics, or prescription-based narcotic pain killers, have long been known to reduce pain, but reports of adverse effects and addiction continue to surface. Now, a team of investigators led by a Saint Louis University researcher has discovered a link between chronic use of pain-relieving medication and increase in the risk of developing major depression.

The study, which was published in the *Journal of General Internal Medicine* on October 31 analyzed medical record data of about 50,000 veterans who had no history of opioid use or [depression](#), and were subsequently prescribed opioid [pain](#) killers.

According to the findings, patients who started and remained on opioids for 180 days or longer were at a 53 percent increased risk of developing a new episode of depression, and those using opioids for 90-180 days were at a 25 percent increased risk compared to patients who never took opioids for longer than 1-89 days.

"These findings suggest that the longer one is exposed to [opioid analgesics](#), the greater is their risk of developing depression," said Jeffrey Scherrer, Ph.D. associate professor of family and community medicine at Saint Louis University and principle investigator of the study. "Opioids have long been known to allay pain and suffering, but reports of [adverse effects](#) are abundant and continue to emerge."

Scherrer said even though there is no clear evidence about the mechanisms by which opioids may contribute to the development of depression in a patient, there could be several factors that lead to it.

Some of these include opioid-induced resetting of the brain's 'reward pathway' to a higher level, which means the chronic use of narcotic [pain killers](#) can elevate the threshold for a person's ability to experience pleasure from natural rewards such as a food or sexual activity.

Other factors may include body aches months and years after the use of [opioids](#) has stopped, side effects such as adrenal, testosterone and vitamin D deficiencies and glucose dysregulation.

The study also suggests that the higher the dose of opioid analgesics, the greater the risk of depression.

"Preliminary evidence suggests that if you can keep your daily dose low, you may be at lower risk for depression," he said.

Scherrer notes that even though a minority of patients take these pain killers chronically, they are at risk of developing depression that can affect their quality of life and ability to cope with [chronic pain](#).

He said recent studies indicate that the use of prescription opioid analgesics has quintupled recently and that more than 200 million prescriptions were issued to patients in 2009 in the US.

"Even though the risk is not huge, there is enough exposure that we may have a public health problem," he said.

**More information:** [link.springer.com/article/10.1007/s11606-013-2648-1](http://link.springer.com/article/10.1007/s11606-013-2648-1)

Provided by Saint Louis University

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