

Men taking long-acting chronic pain meds five times more likely to have low testosterone levels

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Low testosterone levels occur five times more often among men who take long-acting instead of short-acting opioids for chronic pain, according to a new Kaiser Permanente study published in *The Clinical Journal of Pain*.

While it has been known that [opioids](#) cause low testosterone in men, this study is the first to show a significant difference in risk between short-acting (immediate release) and long-acting opioids.

The 81 men in the retrospective study were between 26 and 79 years old (median age 51) and were seen in the chronic-pain clinic at Kaiser Permanente's Santa Rosa Medical Center (Calif.) between January 2009 and June 2010. All of the participants had been on a stable dose of an opioid for at least three months, and none had a previous diagnosis of low testosterone. A larger [retrospective study](#) of more than 1,500 male pain patients is currently under way.

"There's a large gap in the evidence base with regard to opioids," said Andrea Rubinstein, MD, of the Departments of Chronic Pain and Anesthesiology, Kaiser Permanente Santa Rosa Medical Center. "More safety and efficacy studies are needed. We need to know how we can prescribe these very useful medications in a way that brings the greatest benefits to our patients, without introducing additional risks."

Once prescribed primarily to [cancer patients](#), the use of opioid-based medications such as [oxycodone \(Oxycontin\)](#) and hydrocodone (Vicodin) for treating chronic, non-cancer pain has increased dramatically in recent decades. An estimated 4.3 million Americans use opioids on a daily basis for pain.

"For years, doctors have been encouraged to prescribe long-acting opioids rather than short-acting opioids because we believed they were safer, had less abuse potential, and offered more consistent pain control, but no study has ever been able to support this practice," Dr. Rubinstein said.

The study compared the use of short-acting opioids, which immediately release the [pain medication](#) and are taken every four to six hours, and long-acting opioids, which slowly release the pain medication and are taken every eight to 12 hours.

A healthy young man should have testosterone levels between 300 and 800 nanograms per deciliter (ng/dL); in this study, low testosterone, also known as hypogonadism, was defined as less than 250 ng/dL. [Low testosterone levels](#) have been associated with decreases in muscle mass, bone density (osteoporosis or osteopenia), cognition, mood, libido (sex drive) and general quality of life.

Seventy-four percent of the men on long-acting opioids had low [testosterone levels](#), compared with 34 percent of the men using short-acting opioids. After controlling for daily dosage and body mass index, the study found that the odds of having low testosterone were 4.78 times greater for men taking a long-acting opioid than a short-acting opioid. Dose was not associated with an increased risk of low testosterone.

"These medications work well for short-term, acute pain," said Dr. Rubinstein. "It has long been extrapolated that they can also be used

safely long-term to control [chronic pain](#). We are now finding that the long-term use of opioids may have important unintended health consequences."

Provided by Kaiser Permanente

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