

Surgery found to increase risk of chronic opioid use, study finds

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Credit: Lynn Greyling/public domain

A study of health insurance claims showed that patients undergoing 11

of the most common types of surgery were at an increased risk of becoming chronic users of opioid painkillers, say researchers at the Stanford University School of Medicine.

But the slight overall increase in risk of 0.5 percent in no way suggests that patients should skip [surgery](#) over concern of becoming addicted to [opioids](#), the study said. Instead, it's a reminder that surgeons and physicians should closely monitor patients' use of opioids after surgery—even patients with no history of using the pain-relieving drugs—and use alternate methods of pain control whenever possible.

The study will be published July 11 in *JAMA Internal Medicine*.

"For a lot of surgeries there is a higher chance of getting hooked on painkillers," said the study's lead author Eric Sun, MD, PhD, an instructor in anesthesiology at Stanford. Sean Mackey, MD/PhD, professor of anesthesiology, is the senior author of the study.

The researchers examined the risks of chronic opioid use following 11 common types of surgeries. Chronic opioid use was defined in the study as patients who filled 10 or more prescriptions or received more than a 120-day supply of an opioid in the first year following surgery, excluding the first three months after surgery.

Patients who had knee surgery had the largest risk, as they were roughly five times more likely than a [control group](#) of nonsurgical patients to end up using opioids chronically, followed by those undergoing [gall bladder surgery](#), whose risk was three-and-a-half times greater than those in the control group.

"We also found an increased risk among women following cesarean section, which was somewhat concerning since it is a very common procedure," adding that the risk was 28 percent higher than among the

control group, Sun said.

Other factors that contributed to an increased risk for chronic opioid use included being male, elderly, taking antidepressants or abusing drugs.

The opioid abuse epidemic

Since prescription painkillers became cheap and plentiful in the mid-1990s, drug overdose death rates in the United States have more than tripled, according to the Centers for Disease Control and Prevention. Seventy-eight Americans die every day from an [opioid overdose](#), it reported.

Previous studies have shown increased risks of chronic opioid use post-surgery, but unlike past studies, Sun and colleagues set out to examine patients who hadn't received prescriptions for opioids for at least one year prior to surgery. Among the opioid prescription drugs examined in the study were hydrocodone, oxycodone and fentanyl—the drug responsible for the recent accidental overdose death of legendary performer Prince.

The researchers examined health claims from 641,941 privately insured patients between the ages of 18 and 64 who had not filled an opioid prescription in the year prior to surgery, then compared them with about 18 million nonsurgical patients, who also hadn't received opioid prescriptions for at least a year. The claims were filed between 2001 and 2013 and provided by MarketScan, a database of 35 million beneficiaries.

Except for the minor procedures known to be somewhat pain-free, such as a cataract surgery and laparoscopic appendectomy, all 11 types of surgery were associated with an [increased risk](#) of chronic opioid use, the study said.

Other pain-control measures

"The message isn't that you shouldn't have surgery," Sun said. "Rather, there are things that anesthesiologists can do to reduce the risk by finding other ways of controlling the pain and using replacements for opioids when possible."

Sun said he and his colleagues in surgery and anesthesia at Stanford try to use regional anesthetics when possible to reduce the need for opioids post-surgery. He added that patients should also be encouraged to use pain-management alternatives such as Tylenol following surgery.

"Even when taken exactly as prescribed, opioids carry significant risks and side effects," said study co-author Beth Darnall, PhD, clinical associate professor of anesthesiology and author of the book *Less Pain, Fewer Pills: Avoid the Dangers of Prescription Opioids and Gain Control over Chronic Pain*. "Ideally, opioids are avoided in treating chronic pain, and pain treatment should emphasize comprehensive care, including physical therapy, pain psychology and self-management strategies."

As a pain psychologist and clinician-scientist, Darnall emphasizes alternate methods of pain management based on evidence-based techniques that can help calm the nervous system such as diaphragmatic breathing, progressive muscle relaxation and mindful meditation.

She is studying the use of a pain psychology class at Stanford for women undergoing surgery for breast cancer called "My Surgical Success" designed to help patients develop a personalized pain-management plan to control the anxiety associated with anticipating surgical pain.

"It turns out that a lot of [chronic pain](#) develops from surgery, and pre-surgical pain 'catastrophizing' is a major risk factor for having a lot of

pain," Darnall said. "We hope that by optimizing [patients'](#) psychology—and giving them skills to calm their own nervous system—they will have less [pain](#) after surgery, need fewer opioids and recover quicker."

Provided by Stanford University Medical Center

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