

# Opioids increase risk of death when compared to other pain treatments

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Pills. Credit: Public Domain

Long-acting opioids are associated with a significantly increased risk of death when compared with alternative medications for moderate-to-severe chronic pain, according to a Vanderbilt study released today in *JAMA*.

Not only did long-acting opioids increase the risk of unintentional overdose deaths, but they were also shown to increase mortality from cardiorespiratory events and other causes.

Lead author Wayne Ray, Ph.D., and colleagues with the Vanderbilt Department of Health Policy studied Tennessee Medicaid patients between 1999-2012 with chronic [pain](#), primarily back and other musculoskeletal pain, who did not have cancer or other serious illnesses.

Researchers compared those starting a long-acting opioid to those taking an alternative medication for moderate-to-severe pain.

Alternative medications included both anticonvulsants—typically prescribed to prevent seizure activity in the brain, treat bipolar disorder or neuropathic pain - and low doses of cyclic antidepressants, which are taken for depression, some pain and migraines.

"We found that the opioid patients had a 64 percent increased risk of [death](#) for any reason and a 65 percent [increased risk](#) of cardiovascular death," said Ray, professor of Health Policy at Vanderbilt University School of Medicine.

"The take-home message for patients with the kinds of pain we studied

is to avoid long-acting opioids whenever possible. This is consistent with recent Centers for Disease Control and Prevention guidelines. This advice is particularly important for patients with high risk for cardiovascular disease, such as those with diabetes or a prior heart attack."

If a long-acting opioid is the only option for effective pain relief, patients should start with the lowest possible dose and only gradually increase it, he said.

The study group had a collective 22,912 new episodes of prescribed therapy for the medications, with 185 deaths in the long-acting opioid group and 87 deaths in the control group.

Long-acting opioid users had 69 excess deaths per 10,000 users. In other words, for every 145 [patients](#) who started a long-acting opioid, there was one excess death.

"We knew opioids increase the risk of overdose. However, opioids can interfere with breathing during the night, which can cause heart arrhythmias," Ray said.

"We were concerned that long-acting opioids might increase cardiovascular death risk, which is what we found. Because most patient populations have more cardiovascular deaths than overdose deaths, our finding means that prior studies may have underestimated the harms of long-acting opioids."

Ray said the findings add urgency to measures to restrict long-acting opioid use to those for whom benefits outweigh harms.

"Data are limited as to the best medicine for the kinds of pain we studied, such as back pain, although for pain involving the nerves, the

non-opioids may be better," Ray said. "For less severe pain, many over-the-counter medications, such as ibuprofen or naproxen, may be as effective as an [opioid](#)."

**More information:** *JAMA*, [DOI: 10.1001/jama.2016.7789](https://doi.org/10.1001/jama.2016.7789)

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