

## Promising medication counteracts constipation caused by opioid painkillers

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Opioids – strong morphine-based painkillers – are widely prescribed to patients experiencing chronic severe pain. While these drugs are very effective for treating and managing pain, they have one particularly bothersome side effect: constipation. A new drug, called naloxegol, could bring relief. In stage 3 trials reported in the *New England Journal of Medicine*, KU Leuven and international researchers provide new evidence that the drug relieves constipation without dulling opioids' pain-relieving effects.

Up until a decade ago, physicians rarely prescribed opioids, reserving them primarily for the terminally sick. Today, opioid-based drugs have proliferated thanks to their 'user-friendliness' and effectiveness. Millions of patients take opioids on a daily basis to manage lower back [pain](#) and chronic joint problems. Opioids also play a critical role in [pain management](#) regimes for cancer patients.

However, opioids have a number of side effects, including nausea, vomiting and – notoriously – constipation. Opioids block pain by binding to 'mu-receptors' in the brain. But they also bind to mu-receptors in the bowels, and this causes constipation.

Some sixty percent of patients that take opioid [pain relievers](#) experience constipation. For some, the bother is so great that they choose to stop taking the drug.

A newly developed opioid antagonist called naloxegol may offer relief.

Stage 3 testing by an international team of researchers led by Belgian gastroenterologist Jan Tack (University Hospitals Leuven) confirms the drug's efficacy.

Naloxegol is based on the same active molecule as naloxone, a drug developed in the 1960s to counter the effects of opioid overdose. Naloxone is commonly used to wake patients from opioid-induced anesthesia after surgery.

To arrive at naloxegol, the researchers modified the molecular structure of naloxone. The result is an orally administered, once-a-day pill for patients experiencing opioid-induced [constipation](#).

The researchers tested the pill's efficacy in two phase 3 studies – with promising results. Naloxegol was shown to maintain opioids' pain-killing effect in the brain and block their effects in the bowels. Bowel function in all of the 1,400 test subjects returned to normal and accompanying stomach pain and other discomforts decreased. No patients experienced a diminished pain-relieving effect as a result of the drug.

While the studies addressed in the paper focused on patients taking [opioids](#) for non-cancer pain such as back pain and other musculoskeletal ailments, similar studies are now underway to examine the effect of naloxegol in patients with chronic cancer-related pain.

Final regulatory approval for the drug is pending in the United States and Europe.

Provided by KU Leuven

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