Antidepressants can Interfere with the Benefits of Common Opioids, Research Finds

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Taking antidepressants and certain opioids may undercut the pain relieving benefits of painkillers. This is according to new research published in the journal PLOS ONE. Researchers suggest that antidepressants can dampen the effects of some common opioids, resulting in less effective pain management.

Because of this, researchers suggest that physicians should consider alternative pain management methods and strategies for patients on antidepressants. These findings are even more important now that there is an opioid epidemic affecting the country. More and more people are dying from an opioid-related overdose.

Opioids are synthetic and semi-synthetic substances derived from the opium poppy plant. This type of drug comes in two broad varieties: those that act directly and those that have to be processed by the body before they can begin to relieve pain.

Morphine and oxycodone are direct-acting opioids. Once taken, they can get right to work. Other opioids like hydrocodone, the opioid ingredient in Vicodin, are considered prodrugs. Prodrugs need to be metabolized in the liver before they can actually bind with the opioid receptors in the brain. This means they don?t

immediately block incoming pain signals.

According to Tina Hernandez-Boussard, the Stanford computational biologist who co-led the study, the problem is that selective serotonin reuptake inhibitors, also called SSRIs, can interfere with the activity of an enzyme in the liver called CYP-2D6, which metabolizes prodrug opioids.

In other words, drugs like Prozac can slow down or prevent prodrug opioids like hydrocodone from being processed. This means that the patient does not receive the pain relieving benefits as they should. Click the link to see Chicago's top rehab placement programs.

If the enzyme can?t perform its job, then the opioid cannot be broken down, and it cannot perform as efficiently.

Unfortunately, these two types of drugs?prodrug opioids and SSRIs?are two of the most commonly prescribed medications in the US. This interaction is therefore not uncommon. It could potentially affect millions, according to Hernandez-Boussard.

?There was theoretical evidence that suggested SSRIs might block prodrug opioids, but we didn't know if it actually affected patient outcomes,? says Hernandez-Boussard.

Her team turned to the electronic medical records of 4,300 surgical patients who had previously been diagnosed with depression. About half of those patients were taking an SSRI antidepressant. The researchers then used a machine learning approach to analyze the effects of SSRI use, opioid type, and pre- and postoperative pain, as measured on a 0-10 scale.

They found that patients on an SSRI who were given a prodrug opioid such as Vicodin had significantly more pain after surgery compared to all the other groups. The effect persisted up to two months after surgery.

?On average, SSRI and prodrug opioid patients had 1 point worse pain on the 0 to 10 scale,? Hernandez Boussard found.

The team believes that these results could lead to better pain management and even reduce opioid prescriptions, especially among patients who are taking antidepressants, knowing now that the latter has a dampening effect.

Hernandez-Boussard says that this interaction can actually lead to misuse or abuse down the road because the patient is taking higher doses of opioids. ?We need to think about how we can tailor treatment towards more vulnerable groups," she says. "More work needs to be done, but this is a good first step.?

If someone in the family is struggling with opioid addiction, it is important to seek help. A combination of medical detox and behavioral therapy can go a long way in the fight against drug abuse. But because every individual is affected by addiction differently, a comprehensive program tailored to their specific needs is necessary. Look for a nearby addiction treatment facility today and find out how drug treatment programs work.

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