

# Antidepressants use for chronic pain on the rise, but are they effective?

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Many people are unaware that some antidepressants (medications used to treat people living with depression) are also being prescribed to treat certain chronic pain conditions.

One in five people experiences chronic pain in Australia and globally, and treatment of chronic pain is often suboptimal, with commonly used medicines having limited or unknown benefits. The use of antidepressants to help manage a person's pain [is on the rise](#), even when they do not have a mood disorder like depression.

An international team of researchers has found that some classes of antidepressants were effective in treating certain pain conditions in adults, but others were either not effective, or the effectiveness was unknown.

Published in *The BMJ*, the study reviewed the safety and effectiveness of antidepressants in the treatment of chronic pain.

The researchers say the results show that clinicians need to consider all the evidence before deciding to prescribe antidepressants for [chronic pain management](#).

"This review, for the first time, brings together all the existing evidence about the effectiveness of antidepressants to treat chronic pain in one comprehensive document," said lead author Dr. Giovanni Ferreira from The Institute for Musculoskeletal Health and Sydney Musculoskeletal Health at the University of Sydney.

The review examined 26 systematic reviews from 2012 to 2022 involving over 25,000 participants. This included data from 8 antidepressant classes and 22 pain conditions including back pain, fibromyalgia, headaches, postoperative pain, and irritable bowel syndrome.

Serotonin-norepinephrine reuptake inhibitors (SNRI) antidepressants such as duloxetine were found to be effective for the largest number of pain conditions, such as back pain, knee osteoarthritis, postoperative

pain, fibromyalgia, and [neuropathic pain](#) (nerve pain).

By contrast tricyclic antidepressants, such as amitriptyline, are the most commonly used antidepressant to treat pain in clinical practice, but the review showed that it is unclear how well they work, or whether they work at all for most pain conditions.

The use of antidepressants as a treatment for pain has recently gained attention globally. A [2021 guideline](#) for chronic primary pain management published by The National Institute for Health and Care Excellence (NICE) recommends against using pain medicines with the exception of antidepressants. The guideline recommends different types of antidepressants, such as amitriptyline, citalopram, duloxetine, fluoxetine, paroxetine or sertraline for adults living with chronic primary pain.

Dr. Ferreira said a more nuanced approach to prescribing antidepressants for pain is needed.

"Recommending a list of antidepressants without careful consideration of the evidence for each of those antidepressants for different pain conditions may mislead clinicians and patients into thinking that all antidepressants have the same effectiveness for pain conditions. We showed that is not the case."

Co-author Dr. Christina Abdel Shaheed, from The School of Public Health and Sydney Musculoskeletal Health at the University of Sydney, said, "The findings from this review will support both clinicians and patients to weigh up the benefits and harms of antidepressants for various pain conditions so that they can make informed decisions about whether and when to use them."

Dr. Ferreira said that there are multiple treatment options for pain, and

people should not rely solely on pain medicines for pain relief.

"Some pain medicines may have a role in pain management, but they need to be considered as only part of the solution. For some pain conditions, exercise, physiotherapy, and lifestyle changes may also help. Speak to your health professional to learn more about what alternatives might be appropriate for you," Dr. Ferreira said.

Professor Christopher Maher, Co-Director of Sydney Musculoskeletal Health at the University of Sydney, said, "This review distilled the evidence from over 150 [clinical trials](#) into an accessible summary that clinicians can use to help them make better decisions for their patients with chronic pain."

## **The current status of antidepressants in Australia and globally**

Most antidepressant prescriptions for pain are "off-label," which is when antidepressants have not been approved to be prescribed for pain.

Many antidepressants are thought to help with pain by acting on chemicals in the brain that can assist with pain relief, such as serotonin. However, it is unknown exactly why some antidepressants improve pain. In Australia, the only antidepressant approved for treating pain is duloxetine, which is approved for diabetic neuropathic pain (nerve pain caused by diabetes).

Amitriptyline is approved in the United Kingdom for some pain conditions, such as neuropathic pain (nerve pain), tension-type headaches and migraines, but it is not approved for treating any pain conditions in Australia.

The use of antidepressants has doubled in OECD countries from [2000 to](#)

[2015](#), and the use of "off-label" prescriptions of [antidepressants](#) for pain is considered a contributing factor to this increase. [Data from](#) Canada, the United States, the United Kingdom and Taiwan, suggest that among older people, [chronic pain](#) was the most common condition leading to an antidepressant prescription, even more so than depression.

Currently, no data from Australia shows how many antidepressant prescriptions are for [pain](#).

**More information:** Giovanni E Ferreira et al, Efficacy, safety, and tolerability of antidepressants for pain in adults: overview of systematic reviews, *The BMJ* (2023). [DOI: 10.1136/bmj-2022-072415](https://doi.org/10.1136/bmj-2022-072415)

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