

**Are antidepressants effective for treating low back pain?****Clinical Question**

What is the effectiveness and safety of antidepressants when used to treat people with non-specific low back pain?

**Bottom Line**

Results indicate that serotonin and norepinephrine reuptake inhibitors (SNRIs) likely show small improvements on pain intensity and trivial effects on disability for non-specific low back pain at short-term follow-up. Tricyclic antidepressants (TCAs) probably have little to no effect on pain intensity but may have a small effect on disability. Evidence for other antidepressants, selective serotonin reuptake inhibitors (SSRIs), and tetracyclic antidepressants (TeCAs) is inconclusive due to small studies and low-certainty evidence.

Evidence indicates that SNRIs are likely associated with a 17% increased risk of adverse events compared to placebo. The risk of adverse events for SSRIs, TCAs, and TeCAs is unclear due to low-certainty evidence.

**Caveat**

Applicability of these results may be affected by the fact that the study participants were younger and more frequently male than the general low back pain population, given that low back pain's prevalence increases with age, and is higher in females than in males. Exclusion criteria for comorbid health conditions were extensive, meaning that study participants may have also had better overall health than those who present clinically.

**Context**

Low back pain is a major global health issue. It has a one-month prevalence of 23.2% and peaks at age 85. Low back pain is the leading cause of disability worldwide, with 500 million cases in 2020, projected to exceed 800 million by 2050. It imposes significant burdens on individuals, society, and the economy, with high healthcare costs. The condition often includes leg pain and has varied sources, making diagnosis challenging. Antidepressants are commonly prescribed for pain relief and associated symptoms.

**Cochrane Systematic Review**

Ferraro MC, Urquhart DM, Ferreira GE, Wewege MA, Abdel Shaheed C, Traeger AC, Hoving JL, Visser EJ, McAuley JH, Cashin AG. Antidepressants for low back pain and spine-related leg pain. Cochrane Database of Systematic Reviews 2025, Issue 3. Art. No.: CD001703. DOI: 10.1002/14651858.CD001703.pub4. This review contains 18 trials which included 2,535 participants.

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Systematic review link:

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD001703.pub4/full>