

knowledge snapshot



A review of drug treatments for disordered and problem gambling

What this article is about

This article is a systematic review of drug treatments for disordered and problem gambling. Here, problem gambling refers to gambling problems that meet clinical level, rather than subclinical problems. This is because medication is used only when the gambling problems are of clinical significance. This review focuses on randomised clinical trials that compared a drug treatment to placebo or another category of drug treatment. A placebo is an inactive drug that has no effect. Randomised clinical trials assign people into different conditions by chance (e.g., treatment vs. placebo). They are considered the highest quality of evidence with regard to the efficacy of a treatment.

What was done?

The authors searched for randomised clinical trials published before January 2022 using several databases. Participants of these studies must meet criteria for disordered or problem gambling using standardised assessment tools, such as clinical interviews based on DSM criteria or the South Oaks Gambling Screen. Participants could have other mental disorders. Studies with participants who were diagnosed with Parkinson's disease were excluded, since medication for Parkinson's disease might be the cause of the gambling problems.

The authors included studies that examined the following categories of drug treatments:

- Antidepressants: drugs to prevent or treat depression.
- Opioid antagonists: drugs to block or reduce the effects of opioids like pain relievers and heroin.
- Mood stabilisers including anticonvulsants: drugs that are used to treat mood instability like mania and bipolar disorder.

Why is this article important?

This article is a systematic review of drug treatments for disordered and problem gambling. The authors found 17 randomised clinical trials comparing a drug treatment to placebo or another category of drug treatment. The review provides some support for the use of opioid antagonists and atypical antipsychotics (olanzapine) in decreasing gambling symptoms in the short term. There is a lack of evidence on whether these drugs can improve gambling behaviours or psychosocial functioning. There is no evidence to support the use of antidepressants. The effects of mood stabilisers (including anticonvulsants) are unclear. The certainty of the evidence regarding any drug treatment is low or very low. Therefore, the findings should be interpreted with caution.

- Atypical antipsychotics: drugs that are used to treat schizophrenia or other mental disorders.

Studies that compared drugs within the same category were out of the scope of this review.

The primary outcome in this review was a decrease in gambling symptoms. The secondary outcomes were gambling spending, gambling frequency, time spent gambling, depressive symptoms, anxiety symptoms, functional impairment, and responder status. Responder status referred to participants being rated as having a positive response to the treatment. The review evaluated data collected at the end of treatment.

What you need to know

The authors found 17 studies with a total of 1193 adult participants. Twelve studies were from the United

States. The rest were from Israel and Spain. Treatment duration ranged from seven to 96 weeks across the studies. The average was around 18 weeks.

Six studies compared antidepressants to placebo. The drugs included selective serotonin reuptake inhibitors (SSRIs, e.g., fluvoxamine, paroxetine, sertraline) and norepinephrine–dopamine reuptake inhibitors (e.g., bupropion). Antidepressants were no more effective than placebo on gambling symptom severity, gambling spending, depressive symptoms, functional impairment, or responder status. Two studies compared antidepressants to the opioid antagonist naltrexone. Two studies compared antidepressants to the anticonvulsant topiramate. Antidepressants were found to be no more effective than the other drugs.

Four studies examined opioid antagonists, naltrexone and nalmefene. Opioid antagonists were more effective than placebo in decreasing gambling symptoms. But there were no clear differences regarding responder status. One study found that opioid antagonists improved depressive symptoms, anxiety symptoms, and functional impairment more than placebo. One study compared naltrexone with the anticonvulsant topiramate, but did not examine the primary outcome of this review. Naltrexone was better than topiramate in improving anxiety and depressive symptoms.

One study compared lithium, a mood stabiliser, to placebo. Three studies examined topiramate, an anticonvulsant. The results for mood stabilisers were uncertain. There were no clear differences for gambling symptom severity, depressive symptoms, or anxiety symptoms. One study found that mood stabilisers improved responder status more than placebo.

Two studies examined olanzapine, an atypical antipsychotic drug. Olanzapine was more effective than placebo in decreasing gambling symptoms.

Overall, the certainty of the evidence was low or very low. This was due to the small number of studies and risk of bias in most studies. Thus, the findings should be interpreted with caution. Also, the long-term effects of any drug treatment were unknown.

Who is it intended for?

This review could be useful to researchers, clinicians, and gambling treatment providers.

About the researchers

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