

Exercise as a treatment for depression

Carl Zhou MD, Nicholas Fabiano MD

■ Cite as: *CMAJ* 2024 May 6;196:E596. doi: 10.1503/cmaj.231288

1 Exercise effectively treats depression and may decrease suicide attempts

A 2023 meta-analysis of randomized controlled trials (RCTs) found that supervised, group or non-group, moderate- or vigorous-intensity, aerobic or resistance exercises (excluding mind-body activities such as yoga) decreased depressive symptoms among participants with depression, with a number needed to treat of 2 and an effectiveness comparable to first-line treatments such as psychotherapy and medication.¹ Another 2023 meta-analysis of RCTs found that exercise decreased suicide attempts among people with mental or physical illness.²

2 Psychological barriers to exercise should be addressed

For people with depression, these include amotivation, low energy, and perceived fatigue, among others.³ While meta-analyses have found positive effects of exercise interventions, these largely involved willing participants with professional support.^{1,2} Addressing psychological barriers is important for exercise implementation.

3 Exercise prescriptions should be specific and exercise supervised

Clinicians should specify the frequency, intensity, time, and type of exercise for patients.⁴ Moderate- to vigorous-intensity aerobic or resistance exercise for 45–60 minutes 3–5 times per week has been shown to have anti-depressive effects,³ although any physical activity is better than none,⁵ and supervision by an exercise professional can maximize effects.^{1,3} Most importantly, patients should be involved in the choice of exercise to increase adherence.⁵

4 Behavioural change techniques, tailored to each stage of change, can increase exercise initiation and adherence⁵

Clinicians should begin with motivation-building techniques, then progress to action-oriented strategies, and, finally, focus on maintenance. They should regularly assess progress, adapt strategies as needed, and provide positive reinforcement. Fortier and colleagues⁵ have provided a practical guide for exercise among people with depression.⁵

5 Exercise interventions are generally safe

Exercise in this population is well tolerated, with minor adverse events such as joint pain, headache, and fatigue.^{1,2} Patients should be screened for pre-existing comorbidities such as injuries, physical inability, and conditions such as severe cardiovascular disease that increase the risk of exercise.¹ Among those without such comorbidities, clinical supervision is not necessary for safety.⁴

References

1. Heissel A, Heinen D, Brokmeier LL, et al. Exercise as medicine for depressive symptoms? A systematic review and meta-analysis with meta-regression. *Br J Sports Med* 2023;57:1049-57.
2. Fabiano N, Gupta A, Fiedorowicz JG, et al. The effect of exercise on suicidal ideation and behaviors: a systematic review and meta-analysis of randomized controlled trials. *J Affect Disord* 2023;330:355-66.
3. Ross RE, VanDerwerker CJ, Saladin ME, et al. The role of exercise in the treatment of depression: biological underpinnings and clinical outcomes. *Mol Psychiatry* 2023;28:298-328.
4. Reed JL, Pipe AL. Practical approaches to prescribing physical activity and monitoring exercise intensity. *Can J Cardiol* 2016;32:514-22.
5. Fortier M, McFadden T, Faulkner G. Evidence-based recommendations to assist adults with depression to become lifelong movers. *Health Promot Chronic Dis Prev Can* 2020;40:299-308.

Competing interests: None declared.

This article has been peer reviewed.

Affiliation: Department of Psychiatry, University of Ottawa, Ottawa, Ont.

Content licence: This is an Open Access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY-NC-ND 4.0) licence, which permits use, distribution and reproduction in any medium, provided that the original publication is properly cited, the use is noncommercial (i.e., research or educational use), and no modifications or adaptations are made. See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Correspondence to: Carl Zhou, carl.zhou@medportal.ca

CMAJ invites submissions to “Five things to know about ...” Submit manuscripts online at <http://mc.manuscriptcentral.com/cmaj>.