



RESEARCH NEWS

One to two hours of exercise each week nearly halves long term risk of depression, finds study

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Exercising for one to two hours every week reduces the risk of developing depression by 44% compared with no regular leisure time physical activity, a large follow-up study has found.¹

Several surveys have previously shown a cross sectional association between exercise and lower rates of depression and anxiety. But the possibility of reverse causality, in which low mood could lead to reduced levels of exercise, has limited the interpretation of these findings.

The new study prospectively analysed levels of exercise and rates of newly diagnosed depression and anxiety in the Health Study of Nord-Trøndelag County (HUNT). This Norwegian study is one of the largest and most comprehensive population based health surveys ever undertaken, including 74 599 adults aged 20 years or older.

All participants completed the 12 item Anxiety and Depression Symptom Index at baseline. This identified 33 908 individuals with no symptoms of anxiety or depression. Of these, just over two thirds (66.5%, 22 564) were followed up after nine to 13 years and asked to complete the Hospital Anxiety and Depression Scale. Study participants reported levels of leisure time exercise at both baseline and follow-up.

Results, reported in the *American Journal of Psychiatry*, showed that 7.0% (1578) of people in the study developed symptoms of depression considered clinically significant and 8.7% (1972) developed anxiety symptoms during the follow-up period.

People reporting no exercise at the start of the study had 44% (95% confidence interval, 17% to 78%) increased odds of developing case level depression compared with those exercising for one to two hours a week ($P=0.003$), after adjusting for

confounding variables including age, education, smoking, and body mass index.

The researchers calculated that 12% of cases of depression could have been prevented if people in the study had taken at least one hour of exercise every week.

“We’ve known for some time that exercise has a role to play in treating symptoms of depression, but this is the first time we have been able to quantify the preventative potential of physical activity in terms of reducing future levels of depression,” said lead author Samuel Harvey from the Black Dog Institute, Sydney, Australia.

In contrast with depression, the study found the prevalence of anxiety was similar regardless of the levels of baseline exercise ($P=0.21$).

“Regular leisure time exercise of any intensity provides protection against future depression, but not anxiety,” the researchers said. They concluded, “Relatively modest changes in population levels of exercise may have important public mental health benefits and prevent a substantial number of new cases of depression.”

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1 Harvey SB, Overland S, Hatch SL, et al. *Exercise and the prevention of depression: results of the HUNT Cohort Study*. *Am J Psychiatry*, 2017, 10.1176/appi.ajp.2017.16111223.

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