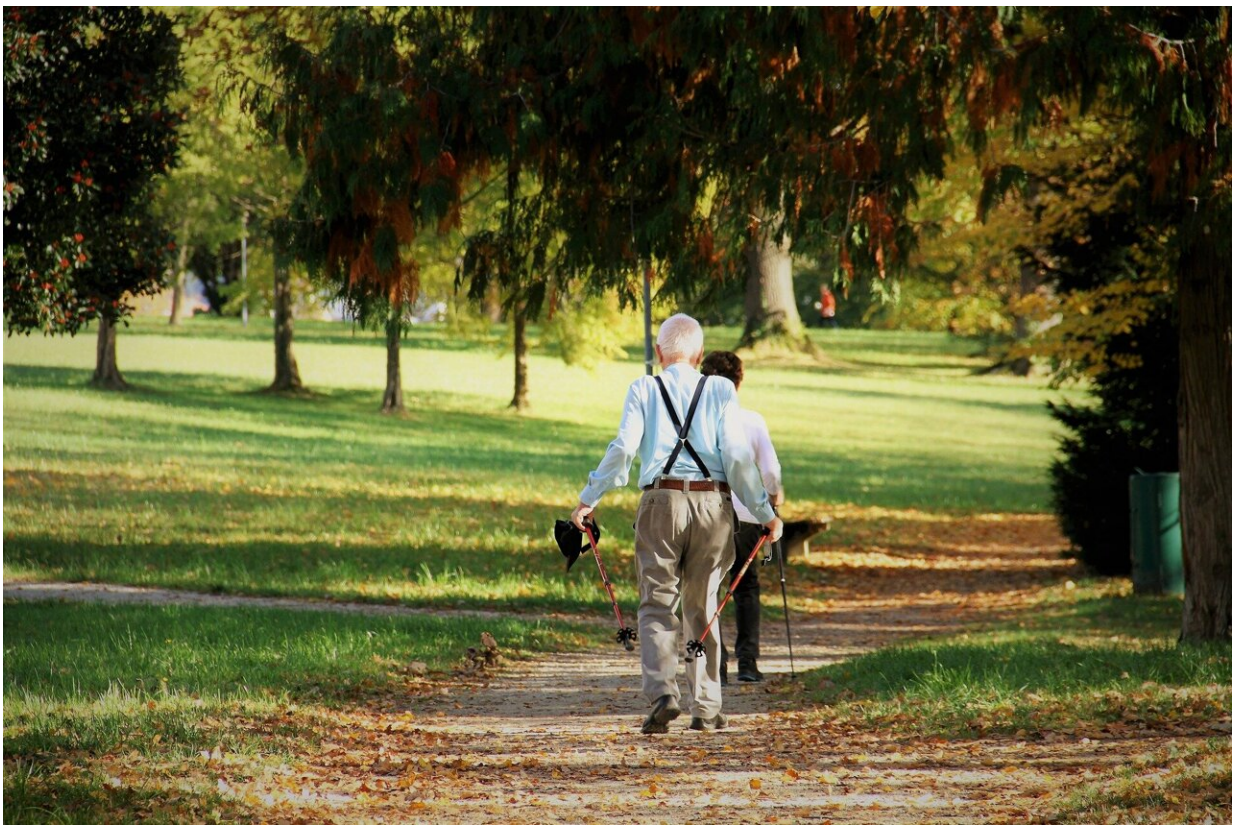


# Research shows even moderate levels of physical activity can protect against depression among older adults

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A new study, conducted by physical activity and mental health experts at University of Limerick and Trinity College Dublin, has shown that a

physical activity dose equivalent to just 20 minutes a day (for five days a week) of moderate-intensity physical activity, like brisk walking, was linked with less risk of depressive symptoms and odds of major depression.

The study has just been published in the *JAMA Network Open* journal.

Depression is unfortunately increasingly common among older adults, and has significant risk factors for major chronic conditions, including cognitive decline, [cardiovascular disease](#) and [chronic pain](#), and increased risk of death and suicide.

Depression causes more than 5%–10% of the burden of all diseases in Europe and the economic cost in the United States alone is estimated to be over \$210.5 billion. Identifying potentially easy and low-cost health and lifestyle solutions that could reduce the risk of [depression](#) remains a top priority.

Recent research has shown moderate-to-vigorous physical activity (MVPA) was linked with benefits for depression.

"However," explained Dr. Eamon Laird, lead author on the paper and a post-doctoral researcher in the Department of Physical Education and Sport Sciences at UL, "there is no agreement on how much physical activity is protective for depression overall, or how this may vary among adults with disease.

"For this work, we used 10 years of data from the Irish Longitudinal Study On Aging which included information on depression, MVPA, and other key health-related variables such as disease, lifestyle factors and socio-economic status.

"We sought to identify the lowest dose of MVPA associated with

protection against Major Depression and [depressive symptoms](#) and the extent to which this varied based on the presence of chronic disease," added Dr. Laird.

## **Key findings from the study include:**

- A physical activity dose equivalent to 20 minutes a day of MVPA (brisk walking) for five days per week was associated with a 16% lower rate of depressive symptoms and 43% lower odds of Major Depression
- A dose-response effect was found, such that more MVPA was associated with greater protection for Depression;
- Specifically, doses equivalent to ~30 minutes a day of MVPA were associated with 7% lower risk of depressive symptoms and 44% lower odds of Major Depression;
- Doses equivalent to ~60 minutes a day of MVPA were associated with: 16% lower risk of depressive symptoms and 41% lower odds of Major Depression;
- Doses equivalent to ~120 minutes a day of MVPA were associated with: 23% lower risk depressive symptoms and 49% lower odds of Major Depression
- These findings remained significant even after controlling for relevant health-related factors like biological sex, education, age, smoking and alcohol, obesity, antidepressant use and time.
- These findings were also materially the same for older adults with and without a chronic illness.

According to Dr. Laird, "This study is very relevant given the high prevalence of depression in our increasing older adult population. Physical activity at lower doses than World Health Organization recommendations for overall health may offer protection against depressive symptoms and Major Depression—at minimum, try to engage in 20 minutes a day of moderate-intensity activity at least five days per

week, with more benefits seen at higher doses.

"Try and build it into a routine with hobbies or activities you enjoy and trying to do it with others as social interactions particularly with activity can also have mental health benefits. Remember that it is one component, and that nutrition and healthy lifestyle will also give additive benefits in addition to the physical activity."

Dr. Matthew Herring, a Senior Lecturer and Investigator in the Physical Activity for Health Research Center at UL and Principal Investigator of this research, added, "The current findings have significant implications in highlighting that significant antidepressant benefits appear to be associated with doses of physical activity that are lower than current World Health Organization recommendations for overall health, though greater doses were associated with stronger protection.

"We are clearly not advocating for lower physical activity among the older adult population, but findings suggest that the largest improvements in protection against depression among older adults may be made by engaging inactive [older adults](#) in [physical activity](#) even at doses below those recommended for overall [health](#)."

**More information:** Eamon Laird et al, Physical Activity Dose and Depression in a Cohort of Older Adults in The Irish Longitudinal Study on Ageing, *JAMA Network Open* (2023). [DOI: 10.1001/jamanetworkopen.2023.22489](#)

Provided by University of Limerick

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