

# High cardiovascular risk is associated with symptoms of depression

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Image of a heart through a window. Credit: Kranich17, Pixabay, CC0, ([creativecommons.org/publicdomain/zero/1.0/](https://creativecommons.org/publicdomain/zero/1.0/))

Cardiovascular risk factors are associated with an increased risk of depression in older adults, according to a new study published April 13

in the open-access journal *PLOS ONE* by Sandra Martín-Peláez of University of Granada, Spain, and colleagues.

Cardiovascular disease and [depression](#) are thought to be closely related due to similar [risk factors](#), including inflammation and oxidative stress. Although it has been shown that depression could be a risk factor for developing [cardiovascular disease](#), studies analyzing the potential impact of cardiovascular health on developing depression are scarce.

In the new study, the researchers used data from an ongoing 6-year multi-center randomized trial in Spain which analyzes the effect of a Mediterranean Diet on men aged 55-75 and women aged 60-75 with overweight or obesity. 6,545 individuals with no cardiovascular or endocrine disease at baseline were included in the current analysis. A cardiovascular risk score according to the Framingham-based REGICOR function was calculated for each person, dividing participants into low (LR), medium (MR), or high/very high (HR) cardiovascular risk groups. Depressive status was gauged using a questionnaire at baseline and after 2 years of follow-up.

At baseline, women in the HR group showed higher odds of depressive status than LR women (OR 1.78 95% CI 1.26-2.50). In addition, among all participants with baseline total cholesterol below 160 mg/mL, MR and HR individuals showed higher odds of depression than LR (MR: OR 1.77 95% CI 1.13-2.77; HR: OR 2.83 95% CI 1.25-6.42). On the contrary, among participants with total cholesterol of 280 mg/mL or higher, MR and HR individuals had a lower risk of depression than LR (MR: OR 0.26 95% CI 0.07-0.98; HR: OR 0.23 95% CI 0.05-0.95). After two years, during which time all [individuals](#) were instructed to follow a Mediterranean Diet as part of the trial, participants, on average, decreased their depressive status score, with the greatest decreases seen for MR and HR participants with high baseline cholesterol levels.

The authors conclude that high and very high cardiovascular risk are associated with [depressive symptoms](#), especially in women, and that the role of other factors, such as adherence to the Mediterranean Diet, deserves further research.

The authors add: "High cardiovascular risk, especially in women, is associated with symptoms of depression in the elderly."

**More information:** Contribution of cardio-vascular risk factors to depressive status in the PREDIMED-PLUS Trial. A cross-sectional and a 2-year longitudinal study, *PLoS ONE* (2022). [DOI: 10.1371/journal.pone.0265079](#)

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