Depression, antidepressants, epigenetic age acceleration, and mortality in postmenopausal women

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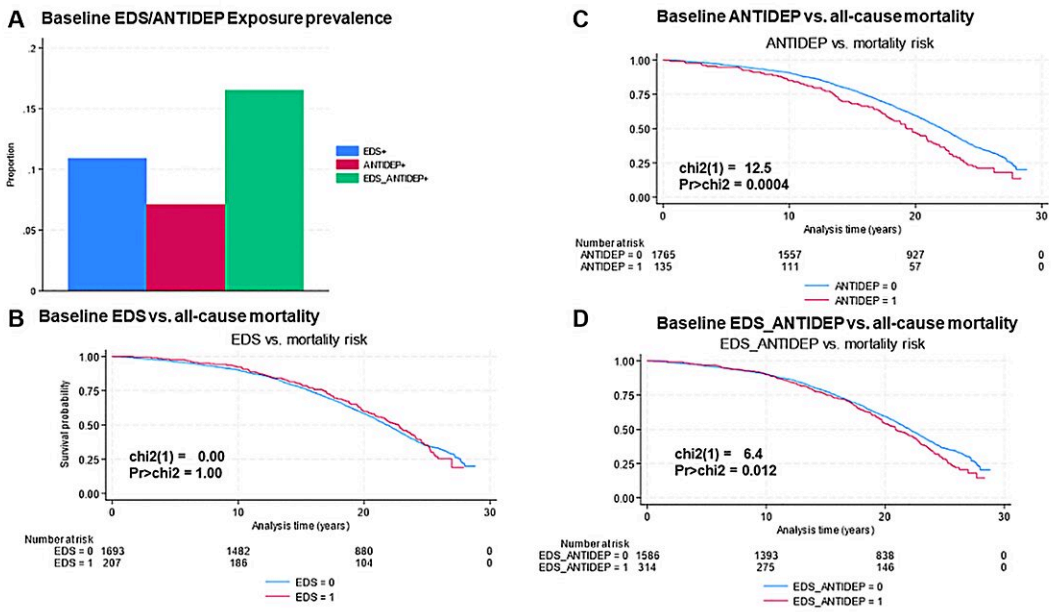

(A–D) Elevated depressive symptoms and antidepressant use baseline exposures vs. all-cause mortality risk, Women's Health Initiative Study. Abbreviations: EDS: Elevated depressive symptoms; ANTIDEP: Antidepressant use; EDS_ANTIDEP: Elevated depressive symptoms and/or antidepressant use. Credit: *Aging* (2024). DOI: 10.18632/aging.205868

A new research paper titled "Relationships of depression and antidepressant use with epigenetic age acceleration and all-cause mortality among postmenopausal women" has been published in *Aging*.

In this new study, researchers from the National Institute on Aging, U.S. Department of Veterans Affairs (Washington, DC), University of Texas Health Science Center at Houston, University of California Los Angeles, University of North Carolina at Chapel Hill, University of California San Diego, Albert Einstein College of Medicine, Wake Forest University School of Medicine, and University of Nevada Reno investigated relations of depressive symptoms, antidepressant use, and epigenetic age acceleration with all-cause mortality risk among postmenopausal women.

"Frequently under-recognized depression is a major contributor to the Global Burden of Diseases while being the most prevalent mental illness among geriatric populations," the researchers note.

Data were analyzed from ≤ 1,900 participants in the Women's Health Initiative study testing four-way decomposition models. After a median 20.4-year follow-up, 1,161 deaths had occurred. Approximately 11% had elevated depressive symptoms (EDS+), 7% were taking antidepressant medication at baseline (ANTIDEP+), while 16.5% fell into either category (EDS_ANTIDEP+).

Baseline ANTIDEP+, longitudinal transition into ANTIDEP+ and accelerated epigenetic aging directly predicted increased mortality risk. GrimAge DNA methylation age acceleration (AgeAccelGrim) partially mediated total effects of baseline ANTIDEP+ and EDS_ANTIDEP+ on all-cause mortality risk in socio-demographic factors-adjusted models (Pure Indirect Effect >0, P 0, P

"Antidepressant use and epigenetic age acceleration independently predicted increased all-cause mortality risk. Further studies are needed

in varying populations," the researchers write.

More information: May A. Beydoun et al, Relationships of depression and antidepressant use with epigenetic age acceleration and all-cause mortality among postmenopausal women, *Aging* (2024). DOI: 10.18632/aging.205868

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