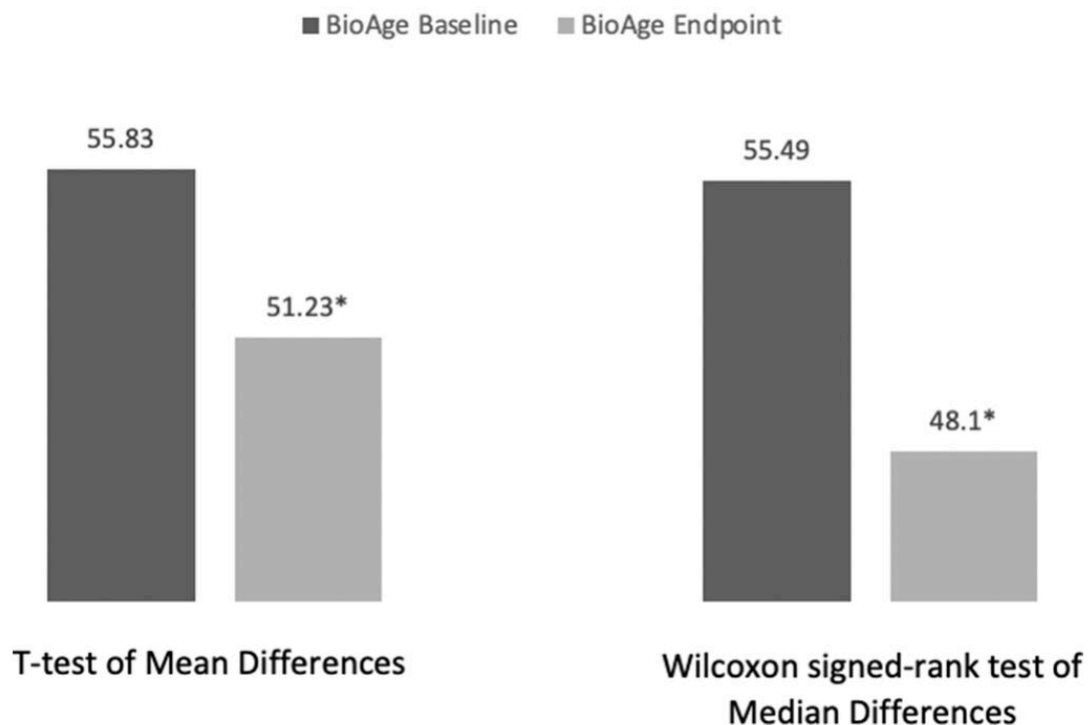


Diet/lifestyle program reverses biological age: A female case series

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Participants' average biological age change analysis. *Significant difference with p-value Aging (2023). DOI: 10.18632/aging.204602

A new research paper was published in *Aging*, titled "Potential reversal of biological age in women following an 8-week methylation-supportive diet and lifestyle program: a case series."

In this new study, researchers Kara N. Fitzgerald, Tish Campbell, Suzanne Makarem, and Romilly Hodges from the Institute for Functional Medicine, Virginia Commonwealth University and the American Nutrition Association reported on a case series of six women who completed a methylation-supportive diet and lifestyle program designed to impact DNA methylation and measures of biological aging.

"The modifiable [lifestyle intervention](#) used by participants in this case series was first investigated in a pilot clinical trial in which participants (all men between the ages of 50-72 years) reduced their [biological age](#) by an average of 3.23 years as compared to controls [7]. The case series reported on herein was conducted to further the investigation of a modifiable lifestyle intervention that was largely the same in other populations; importantly in women," write the researchers.

The team carried out an intervention consisting of an eight-week program. This program included guidance on diet, sleep, exercise, and relaxation, supplemental probiotics and phytonutrients and nutritional coaching. DNA methylation and biological age analysis (Horvath DNAmAge clock (2013), normalized using the SeSAmE pipeline [a]) was conducted on blood samples at baseline and at the end of the eight-week period.

Five of the six participants exhibited a biological age reduction of between 1.22 and 11.01 years from their baseline biological age. There was a statistically significant ($p=.039$) difference in the participants' mean biological age before (55.83 years) and after (51.23 years) the 8-week diet and lifestyle intervention, with an average decrease of 4.60 years.

The average chronological age at the start of the program was 57.9 years and all but one participant had a biological age younger than their chronological age at the start of the program, suggesting that biological

age changes were unrelated to disease improvement and instead might be attributed to underlying aging mechanisms.

"This case series of women participants extends the previous pilot study of this intervention in men, indicating that favorable biological age changes may be achievable in both sexes. In addition, the investigation of otherwise-healthy individuals, rather than those with diagnosed disease, suggests an influence directly on underlying mechanisms of aging instead of disease-driven aging," conclude the researchers.

More information: Kara N. Fitzgerald et al, Potential reversal of biological age following an 8-week methylation-supportive diet and lifestyle program: a case series, *Aging* (2023). [DOI: 10.18632/aging.204602](https://doi.org/10.18632/aging.204602)

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