Medical Xpress

Three years younger in just eight weeks? A new study suggests yes

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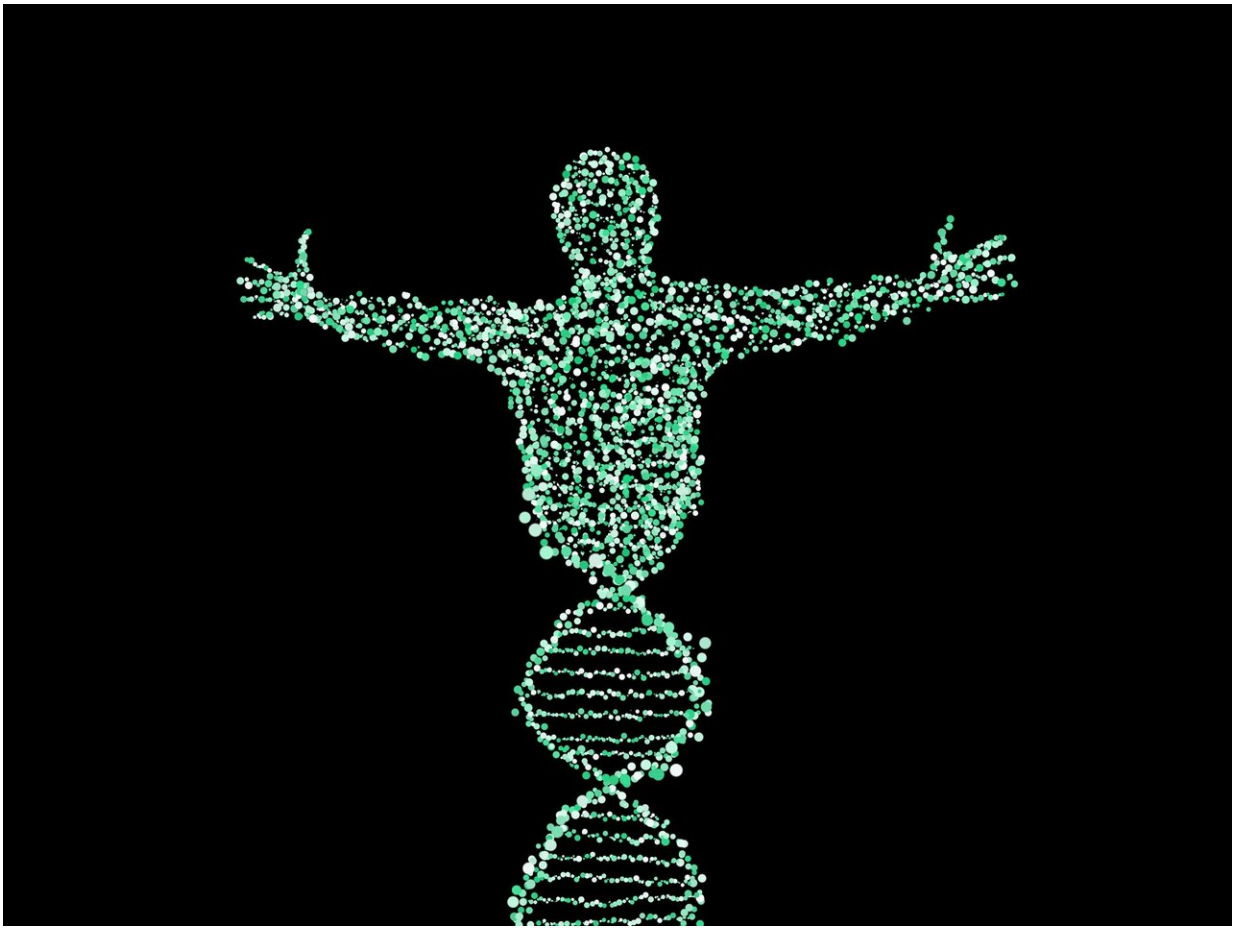


Credit: Pixabay/CC0 Public Domain

A groundbreaking clinical trial shows we can reduce biological age (as

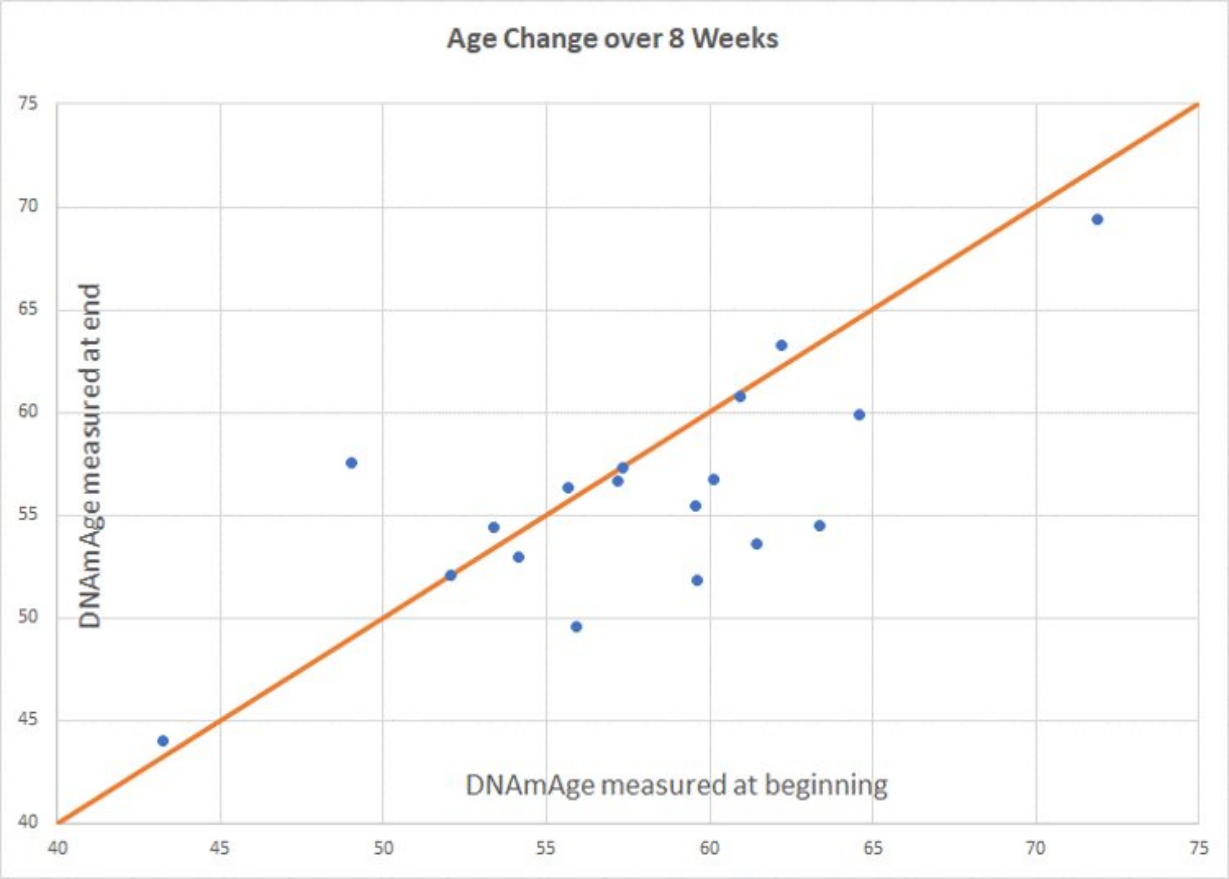
measured by the Horvath 2013 DNAmAge clock) by more than three years in only eight weeks with diet and lifestyle through balancing DNA methylation.

A first-of-its-kind, peer-reviewed study provides scientific evidence that lifestyle and diet changes can deliver immediate and rapid reduction of our biological age. Since aging is the primary driver of chronic disease, this reduction has the power to help us live better, longer.

The study, released on April 12, utilized a randomized controlled clinical trial conducted among 43 healthy adult males between the ages of 50-72. The 8-week treatment program included diet, sleep, exercise and relaxation guidance, and supplemental probiotics and phytonutrients, resulting in a statistically significant reduction of biological age—over three years younger, compared to controls.

The study was independently conducted by the Helfgott Research Institute, with laboratory assistance from Yale University Center for Genome Analysis, and the results independently analyzed at McGill University and the National University of Natural Medicine.

The study's lead author, Kara Fitzgerald ND IFMCP, stated that "the combined intervention program was designed to target a specific biological mechanism called DNA methylation, and in particular the DNA methylation patterns that have been identified as highly predictive of biological age. We suspect that this focus was the reason for its remarkable impact. These early results appear to be consistent with, and greatly extend, the very few existing studies that have so far examined the potential for biological age reversal. And it is unique in its use of a safe, non-pharmaceutical dietary and lifestyle program, control group, and the extent of the age reduction. We are currently enrolling participants for a larger study which we expect will corroborate these findings."



Intervention group age change. Participants scored an average of 1.96 years younger than baseline (p=0.066). Of 18 participants included in the final analysis, 8 scored age reduction, 9 were unchanged, and 1 increased in methylation age. Credit: Kara N. Fitzgerald

Leading epigeneticist Moshe Szyf Ph.D. of McGill University and co-author on the study adds, "The uniqueness of Dr. Fitzgerald's approach is that her trial devised a natural but mechanistic driven strategy to target the methylation system of our body. This study provides the first insight into the possibility of using natural alterations to target epigenetic processes and improve our well being and perhaps even longevity and lifespan."

DNA methylation patterns have become a leading means by which scientists evaluate and track biological aging, a term used to describe the accumulation of damage and loss of function to our cells, tissues and organs. This damage is what drives diseases of aging. "What is extremely exciting," commented Dr. Fitzgerald, "is that food and lifestyle practices, including specific nutrients and food compounds known to selectively alter DNA methylation, are able to have such an impact on those DNA methylation patterns we know predict aging and age-related disease. I believe that this, together with new possibilities for us all to measure and track our DNA methylation age, will provide significant new opportunities for both scientists and consumers."

More information: Kara N. Fitzgerald et al, Potential reversal of epigenetic age using a diet and lifestyle intervention: a pilot randomized clinical trial, *Aging* (2021). DOI: 10.18632/aging.202913

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