

# Study reveals accelerated aging in women living with HIV

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Women with HIV experience accelerated DNA aging, a phenomenon that can lead to poor physical function, according to a study led by Stephanie Shiau, an assistant professor in the Department of Biostatistics and Epidemiology at the Rutgers School of Public Health.

Published in *The Journal of Infectious Diseases*, the study sheds light on the unique challenges faced by women with HIV as they age and opens avenues for tailored interventions to enhance [health outcomes](#). [Globally](#), over 50% of individuals living with HIV are women, and women accounted for an estimated 46% of all new infections in 2022.

Women with HIV experience higher rates of bone loss compared to women without the virus, which can place them at increased risk of fracture as they age, according to results from the [Women's Interagency HIV Study](#).

"Understanding the [molecular mechanisms](#) behind accelerated aging in people with HIV is crucial for developing targeted interventions and improving the quality of life for those living with the virus," said Shiau.

Shiau said while accelerated aging has been reported in people with HIV, these studies have been primarily conducted among men and not women.

The study focused on a sample of 195 women with HIV ages 40 to 60, comparing them to a cohort of women without the virus, and conducted various analyses to explore how markers of aging measured in blood were related to bone mineral density and measurements of physical function, such as [muscle strength](#), walking speed, balance and endurance.

Women with HIV were aging faster than their [chronological age](#), according to the study findings.

In both groups, women who couldn't hold a single leg stand for 30 seconds displayed increased aging, suggesting potential links between accelerated aging and certain aspects of physical function and emphasizing the need for further research to confirm and comprehend these associations over time.

"The work demonstrates that women living with HIV experience an accelerated [aging process](#) at the DNA level, and that this aging process may be linked to functional outcomes," said Shiao. "Future studies will need to see whether these findings are observed longitudinally."

The research not only contributes insights into the challenges faced by [women](#) with HIV but provides a basis for further examination of long-term outcomes for those living with the virus.

Co-authors of the study include researchers from collaborating institutions in New York, Illinois and California.

**More information:** Epigenetic aging and musculoskeletal outcomes in a cohort of women living with HIV, *The Journal of Infectious Diseases* (2024).

Provided by Rutgers University

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