

Study links childbearing to accelerated aging

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A new study by Yale anthropologists has uncovered the first evidence that childbearing may cause accelerated aging in women.

The researchers tested 100 healthy postmenopausal women from five rural villages in southern Poland for [biomarkers](#) associated with accelerated aging.

The study, conducted in partnership with researchers from Jagiellonian University Medical College in Krakow and the Polish Academy of Sciences, found that the women with higher gravidity—those who had experienced more pregnancies, more births, and spent more time lactating—had [higher levels](#) of the biomarkers for accelerated aging than [women](#) with lower gravidity.

Women who had experienced at least four pregnancies had 20% higher levels of 8-OHdG, a biomarker of oxidative damage to DNA. They had 60% higher levels of Cu-Zn SOD, an enzyme that provides the body's primary anti-oxidative defense, indicating increased oxidative stress, which is an important contributor to aging.

This biological connection between childbearing and accelerated aging has been documented in animals, but never so clearly before in humans.

"Like all organisms, people face trade-offs between reproduction and maternal survival in places where energy resources are limited, like a rural farming village," says Richard Bribiescas, Yale professor of anthropology, and of ecology and evolutionary biology, and coauthor of the study. "This study, for the first time, provides compelling evidence of those trade-offs in humans."

The study appears in the scientific journal *Plos One*.

More information: Anna Ziomkiewicz et al. Evidence for the Cost of Reproduction in Humans: High Lifetime Reproductive Effort Is Associated with Greater Oxidative Stress in Post-Menopausal Women, *PLOS ONE* (2016). [DOI: 10.1371/journal.pone.0145753](https://doi.org/10.1371/journal.pone.0145753)

Provided by Yale University

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