Having children can make women's telomeres seem 11 years older

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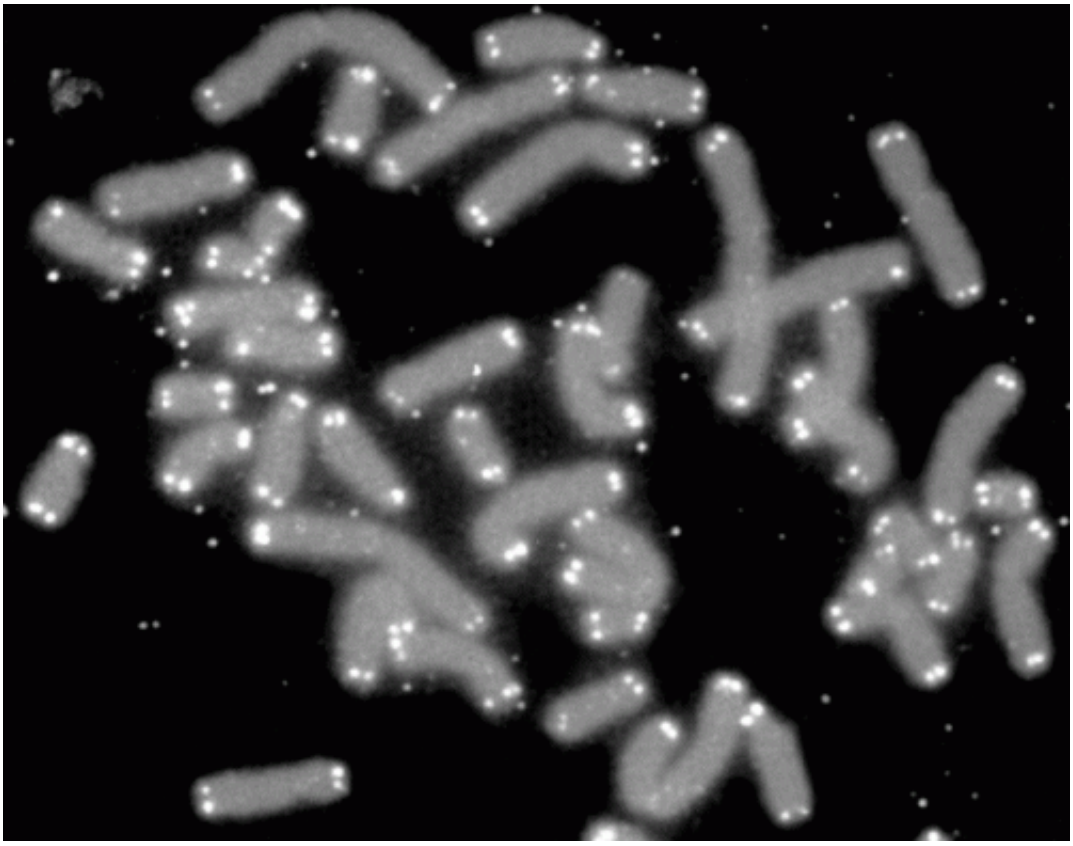

Human chromosomes (grey) capped by telomeres (white). Credit: PD-NASA; PD-USGOV-NASA

A recent study by George Mason University researchers in the Department of Global and Community Health found that women who have given birth have shorter telomeres compared to women who have

not given birth. Telomeres are the end caps of DNA on our chromosomes, which help in DNA replication and get shorter over time. The length of telomeres has been associated with morbidity and mortality previously, but this is the first study to examine links with having children.

Their findings were published in *Human Reproduction*. The authors reported that telomeres among women who had children were the equivalent of 11 years shorter. This was a larger change than has been reported by other research groups for smoking or obesity. Dr. Anna Z. Pollack, lead author of the study, pointed out, "with cross-sectional data, we can't tell if having children is related to shortening of telomeres or merely whether women who have children start out with shorter telomeres." Additional factors to consider include stress and social support, as well as whether similar findings are seen in men.

The paper utilized data from the National Health and Nutrition Examination Survey, which is a nationally representative study in the United States. Pollack notes that these findings, "are preliminary and should be confirmed with prospective studies." The study was co-authored by Mason alumna, Kelsey Rivers, who completed the research study through a George Mason University Undergraduate Research Scholars Program award.

The article, "Parity associated with telomere length among US reproductive age women," is available online.

More information: A Z Pollack et al, Parity associated with telomere length among US reproductive age women, *Human Reproduction* (2018). DOI: 10.1093/humrep/dey024

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