

New study suggests that breastfeeding may help prevent cognitive decline

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Breastfeeding mother. Credit: UCLA Health

A new study led by researchers at UCLA Health has found that women over the age of 50 who had breastfed their babies performed better on cognitive tests compared to women who had never breastfed. The

findings, published in *Evolution, Medicine and Public Health*, suggest that breastfeeding may have a positive impact on postmenopausal women's cognitive performance and could have long-term benefits for the mother's brain.

"While many studies have found that [breastfeeding](#) improves a child's [long-term health](#) and well-being, our study is one of very few that has looked at the long-term health effects for [women](#) who had breastfed their babies," said Molly Fox, Ph.D., lead author of the study and an Assistant Professor in the UCLA Department of Anthropology and the Department of Psychiatry and Biobehavioral Sciences. "Our findings, which show superior [cognitive performance](#) among women over 50 who had breastfed, suggest that breastfeeding may be 'neuroprotective' later in life."

Cognitive health is critical for wellbeing in aging adults. Yet, when cognition becomes impaired after the age of 50, it can be a strong predictor of Alzheimer's Disease (AD), the leading form of dementia and cause of disability among the elderly—with women comprising nearly two-thirds of Americans living with the disease.

Many studies also show that phases of a woman's reproductive life-history, such as menstruation, pregnancy, breastfeeding and menopause can be linked to a higher or lower risk for developing various health conditions like depression or breast cancer, yet few studies have examined breastfeeding and its impact on women's long-term cognition. Of those that have, there has been conflicting evidence as to whether breastfeeding might be linked to better cognitive performance or Alzheimer's risk among post-menopausal women.

"What we do know is that there is a positive correlation between breastfeeding and a [lower risk](#) of other diseases such as type-2 diabetes and heart disease, and that these conditions are strongly connected to a

higher risk for AD," said Helen Lavretsky, MD, the senior author of the study and a professor in the Department of Psychiatry and Biobehavioral Sciences at the Semel Institute for Neuroscience and Human Behavior at UCLA.

"Because breastfeeding has also been found to help regulate stress, promote infant bonding and lower the risk of post-partum depression, which suggest acute neurocognitive benefits for the mother, we suspected that it could also be associated with long-term superior cognitive performance for the mother as well," added Dr. Fox.

To find out, the researchers analyzed data collected from women participating in two cross-sectional randomized controlled 12-week [clinical trials](#) at UCLA Health: 1) The "Brain Connectivity and Response to Tai Chi in Geriatric Depression and Cognitive Decline," included depressed participants. 2) The "Reducing Risk for Alzheimer's Disease in High-Risk Women through Yoga or Memory Training that included non-depressed participants with some subjective memory complaints and a risk for heart disease.

Among the two trials, 115 women chose to participate, with 64 identified as depressed and 51 non-depressed. All participants completed a comprehensive battery of psychological tests measuring learning, delayed recall, executive functioning and processing speed. They also answered a questionnaire about their reproductive life-history that included questions about the age they began menstruating, number of complete and incomplete pregnancies, the length of time they breastfed for each child and their age of menopause.

Importantly, none of the participants had been diagnosed with dementia, or other psychiatric diagnoses such as bipolar disorder, alcohol or drug dependence, neurological disorders or had other disabilities preventing their participation or taking any psychoactive medications. There was

also no significant difference in age, race, education or other cognitive measures between the depressed and non-depressed participants.

Key findings from the researchers' analysis of the data collected from questionnaires on the women's reproductive history revealed that about 65% of non-depressed women reported having breastfed, compared to 44% of the depressed women. All non-depressed participants reported at least one completed pregnancy compared to 57.8% of the depressed participants.

Results from the [cognitive tests](#) also revealed that those who had breastfed, regardless of whether they were depressed or not, performed better in all four of the cognitive tests measuring for learning, delayed recall, executive functioning and processing compared to women who had not breastfed.

Separate analyses of the data for the depressed and non-depressed groups also revealed that all four cognitive domain scores were significantly associated with breastfeeding in the women who were not depressed. But in the women who were depressed, only two of the cognitive domains—executive functioning and processing speed—were significantly associated with breastfeeding.

Interestingly, the researchers also found that longer time spent breastfeeding was associated with better cognitive performance. When they added up all the time a woman spent breastfeeding in her life, they found that women who did not breastfeed had significantly lower cognitive scores in three out of four domains compared to women who had breastfed for 1-12 months, and in all four domains compared to the women who had breastfed for more than 12 months. Women who had breastfed the longest had the highest cognitive test scores.

"Future studies will be needed to explore the relationship between

women's history of breastfeeding and cognitive performance in larger, more geographically diverse groups of women. It is important to better understand the health implications of breastfeeding for women, given that women today breastfeed less frequently and for shorter time periods than was practiced historically," said Dr. Fox.

More information: Women who breastfeed exhibit cognitive benefits after age 50, *Evolution, Medicine and Public Health*, [DOI: 10.1093/emph/eoab027/6380138](https://doi.org/10.1093/emph/eoab027/6380138)

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