

# Breastfeeding duration associated with cognition

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A baby breastfeeding. Credit: Timothy Meinberg, Unsplash, CC0  
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Breastfeeding duration is associated with improved cognitive scores at ages 5 through 14, even after controlling for socioeconomic position and maternal cognitive ability, according to a new study published this week in *PLoS ONE* by René Pereyra-Elías, Maria Quigley and Claire Carson of the University of Oxford, U.K.

Previous studies have found an association between [breastfeeding](#) and standardized [intelligence test scores](#); however, a [causal relationship](#) is still debated. Improved [cognitive outcomes](#) could potentially be explained by other characteristics—such as socioeconomics and maternal intelligence—of the women who breastfeed their babies.

In the new study, the researchers analyzed data on 7,855 infants born in 2000-2002 and followed until age 14 as part of the UK Millennium Cohort Study. The cohort was not specifically designed to address the association between breastfeeding and cognition but included the collection of information on duration of any breastfeeding, duration of exclusive breastfeeding, verbal cognitive scores at ages 5, 7, 11, and 14, spatial cognitive scores at ages 5, 7 and 11, as well as potential confounders including [socioeconomic characteristics](#) and maternal cognition as based on a vocabulary test.

The unadjusted associations found that longer breastfeeding durations were associated with higher verbal and spatial cognitive scores at all ages up to ages 14 and 11, respectively. After taking the differences in [socioeconomic position](#) and maternal cognitive ability into account,

children breastfed for longer scored higher in cognitive measures up to age 14, in comparison to children who were not breastfed. Longer breastfeeding durations were associated with mean cognitive scores 0.08 to 0.26 standard deviations higher than the mean cognitive score of those who never breastfed. This difference may seem small for an individual child but could be important at the population level.



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The authors conclude that a modest association between breastfeeding duration and cognitive scores persists after adjusting for socioeconomics and maternal intelligence.

The authors add that "there is some debate about whether breastfeeding a baby for a longer period of time improves their [cognitive development](#). In the U.K., women who have more educational qualifications and are more economically advantaged tend to breastfeed for longer. In addition, this group tends to score more highly on cognitive tests. These differences could explain why babies who breastfeed for longer do better in cognitive assessments. However, in our study, we found that even after taking these differences into account, children breastfed for longer scored higher in cognitive measures up to age 14, in comparison to children who were not breastfed. This difference may seem small for an individual child but could be important at the population level."

**More information:** Maria Quigley et al, To what extent does confounding explain the association between breastfeeding duration and cognitive development up to age 14? Findings from the UK Millennium Cohort Study, *PLoS ONE* (2022). [DOI: 10.1371/journal.pone.0267326](https://doi.org/10.1371/journal.pone.0267326)

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