

# Breastfeeding may improve children's intelligence scores

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Long-term, exclusive breastfeeding appears to improve children's cognitive development, according to a report in the May issue of *Archives of General Psychiatry*.

Previous studies have reported that children and adults who were breastfed as infants have higher scores on IQ tests and other measures of cognitive (thinking, learning and memory) development than those who were fed formula, according to background information in the article.

However, the evidence has been based on observational studies, in which children whose mothers chose to breastfeed were compared with those whose mothers chose not to breastfeed. The results of these studies may be complicated by subtle differences in the way breastfeeding mothers interact with their infants, the authors note.

Michael S. Kramer, M.D., of McGill University and the Montreal Children's Hospital, Montreal, Quebec, and colleagues conducted a randomized trial of a breastfeeding promotion program involving patients at 31 maternity hospitals and affiliated clinics in Belarus. Between June 1996 and December 1997, clinics were randomly assigned either to adopt a program supporting and promoting breastfeeding or to continue their current practices and policies. A total of 7,108 infants and mothers who visited facilities promoting breastfeeding and 6,781 infants and mothers who visited control facilities received follow-up interviews and examinations between 2002 and 2005, when the children were an average of 6.5 years old.

Mothers who visited a facility promoting breastfeeding were more likely to feed their infants only breast milk at age 3 months (43.3 percent vs. 6.4 percent in the control group) and at all ages through 1 year. At age 6.5, the children in the breastfeeding group scored an average of 7.5 points higher on tests measuring verbal intelligence, 2.9 points higher on tests measuring non-verbal intelligence and 5.9 points higher on tests measuring overall intelligence. Teachers also rated these children significantly higher academically than control children in both reading and writing.

“Even though the treatment difference appears causal, it remains unclear whether the observed cognitive benefits of breastfeeding are due to some constituent of breast milk or are related to the physical and social interactions inherent in breastfeeding,” the authors write. Essential long-chain fatty acids and a compound known as insulinlike growth factor I, both found in breastmilk, could be responsible for the cognitive differences. On the other hand, the physical or emotional component of breastfeeding may lead to permanent changes affecting brain development. Breastfeeding also may increase verbal interaction between mother and child, which could improve children’s cognitive development.

“Although breastfeeding initiation rates have increased substantially during the last 30 years, much less progress has been achieved in increasing the exclusivity and duration of breastfeeding,” the authors conclude. “The consistency of our findings based on a randomized trial with those reported in previous observational studies should prove helpful in encouraging further public health efforts to promote, protect and support breastfeeding.”

Source: JAMA and Archives Journals

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