

Breastfeeding for Healthy Early Brain Development

Background

Within the first three years of life, the brain undergoes a period of rapid growth and development. During this time, a child's brain is most susceptible to experiences and interactions. Not only do these early childhood experiences impact the architecture of the developing brain, but they can also have lasting impacts on lifelong health and wellbeing. Further, early brain development directly contributes to early literacy and school readiness and is a major factor contributing to an individual's ability to learn and succeed later in life.

Due to the susceptibility of a child's brain to early life experiences, it is critical to promote protective factors in early childhood to improve outcomes, including breastfeeding. Breast milk [provides](#) infants with the best nutrition possible while simultaneously supporting healthy early brain development. Breastfeeding is shown to improve cognitive performance and has been associated with better educational achievement later in life.

This brief explores the linkages between breastfeeding and early brain development. It explains how home visiting programs provide breastfeeding support, foster healthy early brain development, and improve overall child health and well-being. Finally, it discusses why state and territorial health agencies should invest in home visiting programs and the positive impact these investments can have.

The Science Behind Breastfeeding and Early Brain Development

Breastfeeding provides many benefits to both mother and baby. Breastmilk [contains](#) a variety of nutrients, vitamins, and minerals vital for early child development, including certain growth factors and hormones that cannot be replicated in infant formula. Breastmilk also supports healthy brain development and is consistently [associated](#) with higher performance on intelligence tests among children and adolescents across all income levels. For example, one study [found](#) that breastfeeding for 12 months or more was associated with a three-point increase in IQ and both higher educational attainment and income.

The experience of breastfeeding contributes to the healthy development of a child's brain. Mother-to-child touch and nurturing interactions during breastfeeding play an important role in [strengthening](#) a child's sensory and emotional circuitry, both of which are important for cognitive and social-emotional development. A study [found](#) that children who were exclusively breastfed for three months and received no other foods or liquids other than breastmilk had increased white matter development in several brain regions associated with social-emotional functioning and language.

Improving Health Outcomes through Home Visiting Programs

Home visiting programs support the positive development of both mother and baby and contribute to healthy early brain development by promoting several protective factors, including breastfeeding. Women and families that participate in home visiting programs receive the necessary social, emotional, and educational support to successfully breastfeed and raise healthy children. For example, [Nurse-Family Partnership](#) (NFP) is one home visiting program that targets low-income, first-time mothers and their families. Upon enrolling in the program, families receive support and information from nurse

practitioners on a wide range of issues including breastfeeding, nutrition, and child development. A national evaluation of the program [demonstrated](#) the positive impact on breastfeeding outcomes. Among mothers who participated in NFP, 21 percent more breastfed at six months compared to a similar reference group of low-income mothers. A second randomized control trial assessing the NFP program [found](#) that first-time pregnant women who received a nurse home visit were 26 percent more likely to attempt breastfeeding compared to 16 percent of women who did not receive a nurse home visit.

[Healthy Families America](#) is another home visiting model that similarly offers home-based services to promote optimal child and family health development. The program includes screenings and assessments to determine risk for adverse childhood experiences, home visiting services, and screening for child development. [Healthy Families New York](#) (HFNY) is a Healthy Families America-accredited home visiting program that provides home-based services to improve the health and well-being of infants and children. The HFNY program focuses on promoting positive parent-child interactions by encouraging mothers to breastfeed. A 2012 report on HFNY [found](#) that 52 percent of mothers who participated in the HFNY home visiting program breastfed their child for at least three months. HFNY has been found effective in improving birth outcomes, supporting positive parenting, and improving children's educational outcomes.

Home visiting is among the most effective strategies for improving outcomes for children and helping them achieve their full potential. While few evidence-based home visiting programs specifically focus on brain development as an outcome of breastfeeding support, data shows that breastfeeding is a protective factor that promotes healthy early brain development. Based on this science, state and territorial health agencies should invest in home visiting programs that focus on breastfeeding support and education in order to positively impact child outcomes and improve the developmental well-being of children in their earliest years.

Conclusion

State and territorial health departments can improve access to lactation services by supporting evidence-based home visiting programs that provide breastfeeding education and support. Home visiting programs offer an opportunity for women to receive in-home visits from healthcare professionals who can assist mothers with breastfeeding needs. These services help mothers and their families better care for their child and build a foundation for successful early childhood brain development. While home visiting services that include breastfeeding messaging and support can positively impact women who are at increased risk of early breastfeeding cessation, few evidence-based home visiting models are intentionally designed to focus on breastfeeding promotion. State and territorial health agencies should implement existing home visiting programs or develop new home visiting programs that focus on breastfeeding support. Providing this support to women and families can improve breastfeeding rates, which in turn promotes healthy early child health and development.