Why Does Breastfeeding Matter for Infants And Their Moms? A Conversation with the Experts

Family & Community Health

Date Posted:

Aug 31, 2018

Editor's Note: Breastfeeding provides a number of key benefits to both moms and babies, but many may not realize just how beneficial it is for early childhood development. In recognition of National Breastfeeding Month, we spoke with a few experts on breastfeeding and early childhood nutrition. Diane Spatz, PhD, RN-BC, FAAN, is a professor of Perinatal Nursing and the Helen M. Shearer Professor of Nutrition at the University of Pennsylvania, as well as a nurse researcher and manager of the Lactation Program at Children's Hospital of Philadelphia (CHOP). Senbagam Virudachalam, MD, MSHP, is an Assistant Professor of Pediatrics at the University of Pennsylvania Perelman School of Medicine and CHOP, a general pediatrician and a PolicyLab faculty member who focuses on early childhood nutrition and fostering healthy eating habits in families with young children.

Q: What are some of the top nutritional benefits that children receive from breastfeeding?

Dr. Spatz: Breastfeeding provides a number of key benefits to infants. For one thing, it is critical for brain development–it literally changes the composition of the brain. Infants who are fed human milk have more white and grey brain matter, both of which have a key role in basic human functions such as muscle control and sensory perception. These infants also develop bigger brains, a trait that is strongly associated with improved IQ, intelligence and positive developmental outcomes.

Second, infants are particularly susceptible to a number of infections as their immune systems have not yet developed to properly fend off viruses. Breastmilk has been shown to protect babies from these infections, including upper- and lower-respiratory infections, gastroenteritis, urinary tract infections and even ear infections. Any parent knows how hard it can be to watch a baby suffer from any one of these infections, so we should promote any evidence-based methods to prevent them.

Finally, researchers have observed a strong relationship between breastfeeding and reduced risk for many conditions and diseases that impact children later on in life. Evidence shows that if infants are breastfed for more than six months, they have reduced risk of developing allergies and asthma and some childhood cancers such as leukemia and Hodgkins lymphoma. Kids who are breastfed also show improved heart function and eye development in childhood, and are more likely to be protected against diseases in adulthood like hypertension, high cholesterol and diabetes.

Believe it or not, these are just a few of the many benefits that infants receive from human milk.

Q: How does breastfeeding set a child up for healthy eating habits later on in life?

Dr. Virudachalam: Because breast milk contains flavors from foods that mothers are eating, breastfeeding lays a crucial foundation for forming children's food and taste preferences. During the transition from milk to solid foods, breastfed babies more easily accept foods with flavors they have been exposed to in breast milk, such as vegetables, fruits, meats and any other foods their mothers favor.

Breastfeeding also teaches children, from the earliest ages, to appropriately respond to their own hunger and satiety (fullness) cues. Mothers produce milk and feed in response to babies' hunger cues, and babies breastfeed until they are full, not until the bottle is empty.

Breastfeeding helps establish a lifetime of healthy eating habits. As health care providers we should strive to empower mothers to feed children in the simplest ways possible, starting with breastfeeding and moving to offering the same foods the rest of the family is eating, initially as purees and later as solid food.

Q: We know that some mothers can't breastfeed for reasons that are out of their control. How common is this, and how do you encourage women who are in this position?

Dr. Spatz: Virtually all women can make 100 percent of their infant's needs. A few exceptions to this rule are women who cannot achieve a full milk supply because they have glandular hypoplasia (about 2 percent of women) or women who had breast surgery, especially breast reduction. While this is what the science says, there are still some women who do not achieve a full milk supply for unexplained reasons. This may occur because they didn't receive accurate information or supports to effectively initiate breastfeeding. Returning to work can also negatively impact breastfeeding duration and exclusivity. In general, we have a tremendous need for research specific to pregnant women and lactating women, as I wrote in an editorial for the *American Journal of Maternal Child Nursing*.

If a healthy infant cannot feed effectively from the breast, the mother should initiate pumping with a hospital-grade pump in order to establish milk supply. There is a critical window of opportunity to effectively engage the prolactin receptor sites in the breasts in order to ensure a copious milk supply. For the first two weeks after delivery, a mother with a healthy infant should focus on breastfeeding her infant, eating and sleeping. If possible, I advise that family members, neighbors or friends mobilize to help the mom with other household and care responsibilities.

In some cases, a preterm birth or infants born with other complications may prevent mothers from breastfeeding immediately. In this instance, it is essential that a mother pumps early and often with a hospital grade-pump with computer chip technology. However, mothers can face barriers to this if their hospitals doesn't supply this type of pump or their insurer doesn't cover it. Research demonstrates that when a mother pumps within one hour compared to within six hours, she will have more milk in the first week and triple the milk supply three weeks following birth. You can learn more about this through our "pump early, pump often" project.

If a mom truly cannot achieve a full milk supply despite access to lactation services and medically accurate information, we need to help her re-contextualize her experience to view her milk not as the primary form of nutrition, but as a vital medicine for her child. Some human milk is better than no human milk at all. Human milk and breastfeeding are dose dependent.

Every drop of human milk really does count! Did you know that these seven ingredients are in human milk and not in formula?

1. Lactoferrin (can kill virtually anything)
2. Stem cells
3. White blood cells
4. Osteopontin (grows and develops the gut wall)
5. Human milk oligosacchrides (short one chain sugars that are pre-biotic and pro-biotic)
6. IgA antibodies (vaccines to protect the infant from pathogens)

7. Antioxidants (protect the infants brain, eyes, lungs and gut wall)

Q: What are policymakers currently doing to facilitate breastfeeding and what challenges still exist?

Dr. Virudachalam: Many policies, programs and organizations currently support breastfeeding in the U.S. This includes bodies such as the Centers for Disease Control and Prevention (CDC) and the U.S. Department of Agriculture (USDA), professional organizations such as the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists and nonprofits such as La Leche League.

One key policy supporting breastfeeding is the Baby Friendly Hospital Initiative, started by UNICEF and the World Health Organization (WHO) in 1991. The Initiative is encapsulated in “The Ten Steps to Successful Breastfeeding,” which lays out hospital standards and practices needed to support breastfeeding. The CDC promotes and measures adherence to *The Ten Steps* across U.S. hospitals. This has led to dramatic improvement, with 26.1 percent of U.S. births currently occurring in hospitals with maternity care practices that support breastfeeding, an increase from 1.8 percent in 2008.

To better support breastfeeding among low-income mothers, the USDA expanded provisions through the Special Assistance Nutrition Program for Women, Infants and Children (WIC) in 2009. These expanded provisions included offering a WIC food package of greater monetary value to exclusively breastfeeding mothers. The CDC and USDA have also led public health campaigns promoting breastfeeding.

Yet many challenges and opportunities remain. For example:

- Federal and state governments could raise the standards employers must meet to support breastfeeding mothers when they return to work, including requiring employers to provide paid breaks for pumping. Broader policy changes such as federally mandated paid family leave would serve to further support breastfeeding mothers.
- Existing guidelines to support breastfeeding could be strengthened. We need laws to regulate the advertising of formula so that messaging is not misleading and does not interfere with breastfeeding, for instance, by prohibiting companies from targeting the marketing of breast-milk substitutes to expectant and new mothers.
- Greater insurance reimbursement could incentivize health systems to further expand maternity care practices that support breastfeeding during the immediate postpartum period in hospital, home and outpatient clinic settings.

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