

Breastfeed Your Baby



Trends, Effects, Solutions

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Eating smart and moving more are the cornerstone of a healthy lifestyle and provide a solid foundation for children and youth to succeed in school and in life.

There are many health benefits associated with good nutrition and physical activity. Eating smart and moving more help children and youth maintain a healthy weight, feel better and have more energy. These positive health benefits have the potential to translate into academic benefits at school. Good nutrition and physical activity nourish the brain and body, resulting in students who are present, on-time, attentive in class, on-task and possibly earning better grades.

As students work hard to achieve high academic standards, it is more important than ever that we provide opportunities for them to be active and eat healthy throughout the day. Families, schools and communities must share the responsibility of promoting and supporting children and youth to eat smart and move more.

Research points to seven key behaviors that can help children, youth and adults eat healthier and be more active:

1. Prepare and eat more meals at home
2. Tame the tube
3. Choose to move more every day
4. Right-size your portions
5. Re-think your drink
6. Enjoy more fruits and veggies
7. Breastfeed your baby



This paper will explore trends in and effects of breastfeeding. It will also examine solutions to help schools, government, communities and families support breastfeeding as the first step in a child's health.

Trends in Breastfeeding

One way to reduce risk for a variety of conditions, including overweight and obesity, is for babies to be exclusively breastfed.

Breastfeeding rates in the United States have increased for mothers who start (initiate) breastfeeding; however, rates are well below the stated goals of the Surgeon General and the Healthy People 2010.¹ Healthy People 2010 objectives for breastfeeding call for:

- 75 percent of mothers to breastfeed in the early postpartum period
- 50 percent to breastfeed at 6 months
- 25 percent to breastfeed at 12 months

The mid-course review of the Healthy People 2010 identified two additional objectives based on the available data:

- Increase the proportion of mothers who exclusively breastfeed through three months to 60 percent
- Increase the proportion of mothers who exclusively breastfeed through six months to 25 percent

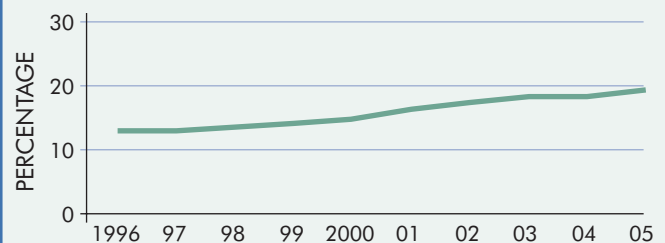
In North Carolina, there has been a consistent increase in breastfeeding rates over time for women and infants participating in the Special Supplemental Nutrition Program for Women,

Exclusive breastfeeding is defined as breastmilk as the sole source of infant nutrition. This means infants receive breastmilk only, and do not receive artificial milk (formula), solid foods or water.

Infants, and Children (WIC). There have been gains in the number of women who report that they “ever breastfed.” In 2000, about 50 percent of women reported breastfeeding and in 2005, almost 58 percent said they breastfed.²

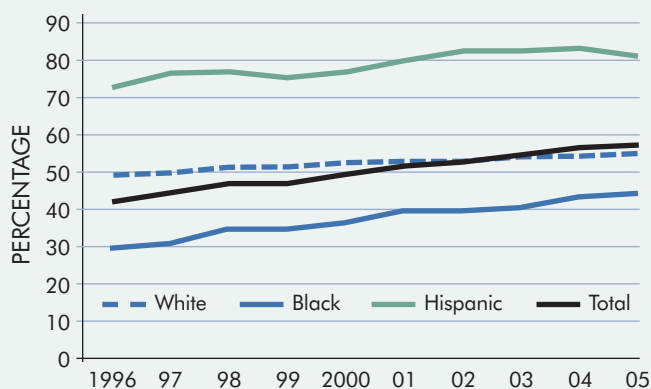
While the number of women continuing to breastfeed at six and 12 months drops significantly, there was a positive trend in duration of breastfeeding between 2000 and 2005. Duration of breastfeeding through six months has increased from 15 percent to almost 20 percent and duration at 12 months has gone from about 11 percent to 15 percent.³

Trends in the percentage of infants breastfed at least 6 months*



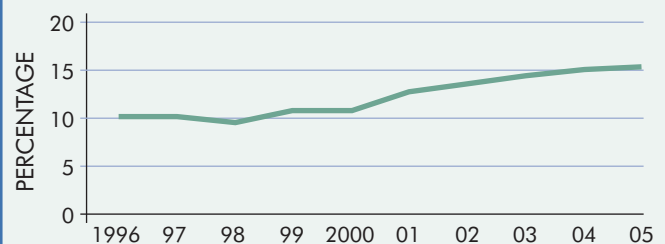
*Source: NC PedNSS—Among infants who turned 6 months of age during the reporting period.

Trends in the percentage of infants ever breastfed* by race and ethnicity



*Source: NC PNSS—Reported by mother at postpartum visit.

Trends in the percentage of infants breastfed at least 12 months*



*Source: NC PedNSS—Among infants who turned 12 months of age during the reporting period.

The Centers for Disease Control and Prevention (CDC) found more promising results in the 2004 National Immunization Survey (NIS) Data. North Carolina breastfeeding initiation was 72 percent, duration through six months was 34 percent and duration through 12 months was 18 percent. In addition to duration data the NIS collected exclusivity data. Almost 23 percent of those surveyed reported exclusively breastfeeding through three months and about 7 percent reported exclusivity through six months.⁴

Despite the steady progress in increasing initiation and duration of breastfeeding, North Carolina, like the rest of the nation, is falling short in reaching the Healthy People 2010 goals. Significant environmental change is needed for North Carolina to reach the Healthy People 2010 goals.

Barriers to Breastfeeding

There are a variety of real and perceived barriers to breastfeeding that have been identified in numerous studies. Major barriers include lack of support (healthcare team, family and employer), lack of training of healthcare professionals, hospital policies, environment and marketing of artificial milk products.^{5,6,7}

Another specific barrier to breastfeeding that has received a lot of media coverage is breastfeeding in public. Across the United States there have been cases of women being denied the right to breastfeed their babies in public settings. In North Carolina, a law that protects breastfeeding mothers was enacted in 1993. It states that *“a woman may breastfeed in any public or private location where she is otherwise authorized to be, irrespective of whether the nipple of the mother’s breast is uncovered during or incidental to the breast feeding.”*⁸

Effects of Breastfeeding

In 2007, the Agency for Healthcare Research and Quality (AHRQ) published a review on the current evidence in the literature. They found that a history of breastfeeding was associated with a reduction of risk for acute ear infections, non-specific gastroenteritis, severe lower respiratory tract infections, atopic dermatitis, asthma in young children, obesity, type 1 and 2 diabetes, childhood leukemia, sudden infant death syndrome, and necrotizing enterocolitis. The report concluded that more research must be conducted to provide us with clearer answers about the protective factors related to breastfeeding and cognitive development.⁹ In other studies, breastfeeding has been shown to lower the risk of infant death by about 20 percent.¹⁰

Breastfeeding and Weight Management

There is growing evidence that exclusively breastfed infants are less likely to become overweight children and adults. As with other positive health outcomes, the strongest impact is seen when babies are exclusively fed breastmilk until six months of age. The American Academy of Pediatrics (AAP), American Academy of Family Physicians (AAFP), American College of Obstetrics and Gynecology (ACOG) and American Dietetic Association (ADA) all recommend exclusive breastfeeding for the first six months of life and continuing to breastfeed with the addition of solid foods until 12 months or as long as mutually desirable for mom and baby.^{5,6,7,11} It is not known what the direct relationship is between breastfeeding and a healthy weight, but studies indicate that the breastfed infant may be able to control his or her hunger better than those fed artificial milk (formula).^{7,12,13,14,15,16}

Overweight in Children and Youth

According to the 2001 Surgeon General's *Call to Action to Prevent and Decrease Obesity*, today there are nearly twice as many overweight children and almost three times as many overweight adolescents as there were in 1980.¹⁷ Results from the 2003-04 National Health and Nutrition Examination Survey (NHANES), using Body Mass Index (BMI), indicate that an estimated 13.9 percent of children ages 2-5 years, 18.8 percent of children ages 6-11 years and 17.4 percent of adolescents ages 12-19 years are overweight.¹⁸ North Carolina 2005 data from children seen in public health settings show an even greater increase in the number of overweight children.¹⁹

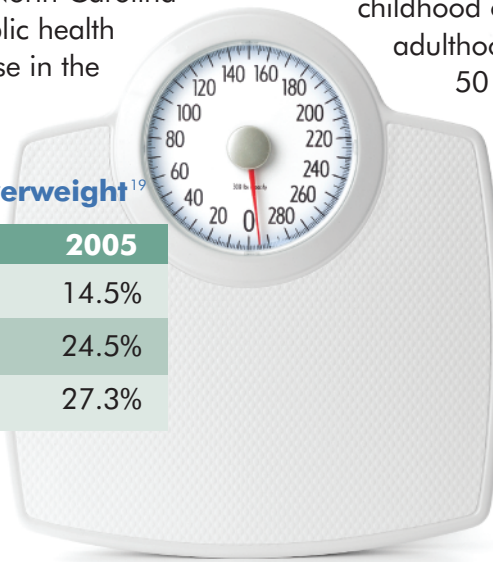
Percent of North Carolina Children and Youth Who Are Overweight¹⁹

	1995	2000	2005
Ages 2-4	9.0%	12.2%	14.5%
Ages 5-11	14.7%	20.6%	24.5%
Ages 12-18	22.7%	26.0%	27.3%

BMI, an index of a person's weight in relation to height, is commonly used to classify overweight and

obesity among adults and is also recommended to identify children who are overweight or at risk of becoming overweight. Children with a BMI \geq 85th percentile but $<$ 95th percentile are overweight (formerly considered at risk for being overweight) and children with a BMI \geq 95th percentile are obese (formerly considered overweight).²⁰

Studies have indicated that overweight children (especially adolescents) are at higher risk of becoming obese adults.²¹ The likelihood that childhood overweight will persist into adulthood ranges from approximately 50 to 70 percent, increasing to 80 percent if one parent is overweight.^{22,23} Obesity is no longer a concern for adults only. Signs of chronic disease associated with obesity are showing up in overweight children. These include atherosclerotic plaques,²⁴ hypertension,^{25,26,27} increased triglycerides,^{25,27} increased insulin resistance and Type 2 diabetes.^{24,28}



Breastfeeding and Intelligence

A 2007 World Health Organization (WHO) report, *Evidence on the long-term effects of breastfeeding: systematic reviews and meta-analyses*,²⁹ looked at studies that collected infant feeding information and duration of breastfeeding. The studies in this review controlled for intellectual stimulation at home. Breastfeeding was positively correlated with performance on intelligence tests. There were three studies that showed a positive effect of breastfeeding related to school performance in late adolescence or young adulthood.

Many parents feel that breastfeeding is related to the intelligence of the child. Whether or not this is a scientific fact has eluded researchers for years. While the AHRQ found that there was not

significant statistical evidence to link breastfeeding to intelligence, the report did acknowledge that there are many factors that may impact the findings. Limitations of the study included examination of only term infants from developed countries.

The debate over how breastfeeding affects intelligence will likely continue. Is there something in the breastmilk that improves cognitive development and intelligence or is it the nurturing act of breastfeeding that shows a positive effect? Fatty acids are essential to brain development and visual acuity and are thought to be the building blocks for cognitive development.³⁰ Fatty acids, naturally found in breastmilk, are being added to artificial milk in an effort to improve cognitive development in infants receiving artificial milk (formula).

Solutions to Increase Breastfeeding

We cannot ignore the perceived and real barriers to breastfeeding if environmental change is to be achieved. North Carolina recently published *Promoting, Protecting and Supporting Breastfeeding: A North Carolina Blueprint for Action*.³¹ This document was the result of a collaborative forum held in 2004 to help build a strategic plan to improve breastfeeding rates. The vision of this document is that North Carolina mothers will be empowered to breastfeed their newborns—the best possible foundation for infant and young child feeding. Eight key recommendations were identified in this process.

1. Encourage the adoption of activities that create breastfeeding-friendly communities.
2. Create a breastfeeding-friendly health care system.
3. Encourage the adoption of breastfeeding-friendly workplaces.
4. Assist child care facilities in promoting, protecting and supporting breastfeeding.
5. Advocate for insurance coverage by all third-party payers for breastfeeding care, services, and equipment when necessary.
6. Involve media and use social marketing and public education to promote breastfeeding.
7. Promote and enforce new and existing laws, policies and regulations that support and protect breastfeeding.
8. Encourage research and evaluation on breastfeeding outcomes, trends, quality of care, and best practices.



The following recommendations will aid schools, government, families and communities as they strive to create an environment that is supportive and protective of breastfeeding. Not only do infants and mothers benefit from supportive environments, employers also benefit. Studies show the mothers who breastfeed are less likely to miss work due to a sick child.³²

Schools

- Include breastfeeding as the normal and preferred method of infant feeding in applicable curricula (science, health) from preschool to post secondary education.³¹
- Include the breast and its function in curricula dealing with the human body and reproductive system (science, health).
- Allow adolescent mothers and adult staff to pump breastmilk during the school day.
- Designate an area for mothers (students and staff) to be able to pump and store milk. If available create a nursing mothers' room within your facility.

Government

- Pass new laws to protect, promote and support breastfeeding.
- Enforce current legislation protecting a mother's right to breastfeed in public.
- Support public health campaigns that promote and support breastfeeding.

Communities

- Advocate for additional laws that will protect breastfeeding mothers and babies.
- Participate in local breastfeeding coalitions or advisory groups.
- Share the message that babies were born to breastfeed with civic organizations, churches and social groups.

Families

- Be supportive of friends and families trying to breastfeed their babies. Ask how you might help with other needs such as bathing the baby or changing diapers.
- Seek out knowledge about breastfeeding from credible sources of information.
- Understand your family history; many chronic diseases are reduced by breastfeeding.
- Reassure family and friends that they should exclusively breastfeed until 6 months and after starting solids should breastfeed until at least 12 months of age.

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Developed by the North Carolina School Nutrition Action Committee (SNAC), a partnership of the N.C. Department of Public Instruction, the N. C. Division of Public Health and the N.C. Cooperative Extension Service. The goal of SNAC is to coordinate school nutrition activities that link the cafeteria, classroom and community to eating smart and moving more.

These institutions are equal opportunity providers.

Suggested citation: Sullivan C, Albright J, Andersen K, Bates T, Beth D, Dunn C, Ezzell J, Schneider L, and Vodicka S. Breastfeed Your Baby. February 2008. Available at www.eatsmartmovemorenc.com.

