Duration Matters!
The Value of Breastfeeding Beyond the First Year

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How long should I breastfeed?
Telling the tale....

Science

SUPER MOM
Compared to NORMAL...

BREASTFEEDING  ARTIFICIAL MILK & BOTTLES

Which is the experiment?
Objectives

- Review the current recommendations & research for extended lactation
  - Nutritional, immunological, emotional and physiological contributions breastmilk provides after the 1\textsuperscript{st} year
- Discuss the reasons mothers and children continue the practice
Objectives

- Examine the concept of weaning and the language we use to advocate for breastfeeding beyond the first year
- Compare the anthropological aspects of child-led versus mother-led weaning.
1. Babies are hardwired to breastfeed
2. Mother's body is the baby's natural habitat
3. Better feel and flow happen at the comfort zone
4. More breastfeeding at first means more milk later
5. Every breastfeeding mum and baby have their own rhythm
6. More milk out means more milk made
7. Children wean naturally

Nancy Mohrbacher, IBCLC
Kathleen Kendall-Tackett PhD (Psychology), IBCLC
International Breastfeeding Symbol

- Supports breastfeeding mothers, infants and children of all ages
- Has no expiration date
International Breastfeeding Symbol

TODDLER EDITION!
So why all the controversy?

Are You Mom Enough?

Why attachment parenting drives some mothers to extremes—and how Dr. Bill Sears became their guru

BY KATE PICKERT
Childhood Outcomes
What do the experts say?
“The AAP reaffirms its recommendation of exclusive breastfeeding for about 6 months, followed by continued breastfeeding as complementary foods are introduced, with continuation of breastfeeding for 1 year or longer as mutually desired by mother and infant.

http://pediatrics.aappublications.org/content/early/2012/02/22/peds.2011-3552.full.pdf+html
“Breastfeeding beyond the first year offers considerable benefits to both mother and child, and should continue as long as mutually desired. If the child is younger than two years of age, the child is at increased risk of illness if weaned.”

http://www.aafp.org/x6633.xml
“[I]nfants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond.

http://www.who.int/nut/documentsgs_infant_feeding_text_eng.pdf
No research indicates a risk to extended breastfeeding.
What happens to the quality of breastmilk beyond one year?

- Does it...
  - Stay the same?
  - Increase?
  - Decrease?
Nutritional Benefits

- Human milk expressed by mothers who have been lactating for >1 year has significantly increased fat and energy contents, compared with milk expressed by women who have been lactating for shorter periods.

  Mandel 2005
Concentration vs. Volume
In the second year (12-23 months), 448 mL (15oz) of breastmilk provided:

- 36% of calcium requirements
- 29% of energy requirements
- 76% of folate requirements
- 43% of protein requirements
- 75% of vitamin A requirements
- 94% of vitamin B12 requirements
- 60% of vitamin C requirements

Dewey 2001
Nutritional Benefits

Human milk components compensate for immature physiological function in infants and children.
Other foods provide toddlers with important nutrients, but only breastmilk contains antibodies that play a role in preventing disease.

Amy Spangler
Breastfeeding: A Parent’s Guide
Who is more at risk for illness?

INFANT

TODDLER
Antibodies are abundant in human milk throughout lactation.

Nutrition During Lactation

IOM 1991; p. 134
Some immune factors in breastmilk increase in concentration during the second year and also during the weaning process.

Goldman 1983
Goldman & Goldblum 1983
Institute of Medicine 1991
Nursing toddlers between the ages of 16 and 30 months have been found to have fewer illnesses and illnesses of shorter duration than their non-nursing peers.

Gulick 1986
Many studies have shown that one of the best ways to prevent allergies and asthma is to breastfeed exclusively for at least 6 months and continue breastfeeding long-term thereafter.
Breastfeeding helps prevent allergy by:

- delaying and reducing exposure to potential allergens thereby minimizing the likelihood of an allergic reaction
- maintaining the protective environment of the intestinal barrier in baby's gut and providing a barrier to potentially allergenic molecules
- providing anti-inflammatory properties that reduce the risk of infections which can act as allergy triggers
Physiological Benefits

- Better digestion and nutrient utilization
- Better immunization response
- Less risk of obesity
- Improved cognitive function
- Continued whole body system support
Research reporting on the psychological and emotional aspects of nursing are scarce.
"Meeting a child's dependency needs is the key to helping that child achieve independence. And children outgrow these needs according to their own unique timetable."

Elizabeth N. Baldwin, Esq.  
Extended Breastfeeding and the Law
One study that focused on infants who nursed longer than a year specifically, showed a significant link between the duration of nursing and mothers' and teachers' ratings of social adjustment in six- to eight-year-old children.

"There are statistically significant tendencies for conduct disorder scores to decline with increasing duration of breastfeeding."

Ferguson et al, 1987
Breastfeeding is thought to influence an individual’s concept of self and on the person’s socialization with others with new relationships becoming progressive embellishments on the breastfeeding relationship.

*Maher 1992*
The Breastfeeding Relationship

SUCKLING STIMULUS

MATERNAL ASPECTS

BREASTMILK
The Sucking Stimulus

- Appears around the 29th week of gestation
- There are two forms of sucking:
  - nutritive
  - non-nutritive (NNS)
- Disappears during normal growth between the ages of one and four years of age
Non-Nutritive Sucking (NNS)

- is considered a natural reflex to satisfy a child’s need for contact
- may include unrestricted sucking on a breast, digit, pacifier or other object like a blanket or toy
- makes a child feel secure & relaxed
- allows the child to learn about the environment through mouthing objects
Non-nutritive Sucking (NNS)

- When NNS occurs at breast, dental malocclusions are uncommon
- Breastfeeding has a positive measurable impact upon oral facial development
- Prolonged use of pacifiers, digits, etc. can cause significant changes in the dental arch, increases likelihood of primary malocclusions and alters the development of facial muscles.
Maternal Outcomes
Maternal Benefits of Breastfeeding Beyond One Year

Reduced risk for at least 4 common types of reproductive cancers:

- Breast cancer
- Ovarian cancer
- Uterine cancer
- Endometrial cancer
Maternal Benefits of Breastfeeding Beyond One Year

- Reduced risk of osteoporosis
- Reduced risk of rheumatoid arthritis.
- Reduced risk of type 1 & 2 diabetes
- Reduced insulin requirements for diabetic women during lactation
- Delayed return of fertility in some women by continuing to suppress ovulation
Cumulative Duration of Lactation

How long does a mother need to breastfeed in her lifetime to reduce her risk of disease?

12 to 24 months or more
Cumulative Lactation & Risk of Breast Cancer

- 12 months+ is associated with a 28% decrease
- 2 years lowers the risk of menopause by 40%
- 6 years lowers the risk of menopause by 66%
- 7+ years lowers the risk of breast cancer throughout a woman’s lifespan to almost zero.
“The longer women breastfeed, the more they are protected against breast cancer. The lack of or short lifetime duration of breastfeeding typical of women in developed countries makes a major contribution to the high incidence of breast cancer in these countries.”

The incidence of breast cancer in developed countries could be reduced by more than 50% (from 6.3 to 2.7 per 100 women) if women had the average number of births and lifetime duration of breastfeeding that had been prevalent in developing countries until recently. Breastfeeding could account for more than two thirds of this estimated reduction in breast cancer incidence.

Women who had been bottle-fed as children had a 25% higher risk of developing breast cancer than women who were breastfed as an infant.
What does history tell us?
Breastfeeding in Ancient Times

Most ancient cultures practiced breastfeeding for 2 to 3 years.

- Greeks
- Hebrews
- Muslims
- The Works of Aristotle
- The Talmud
- The Koran
God is El Shaddai
- “El” = the “Strong One”
- “shad” = “the breast”

Shaddai means the “breasted”

“He is the nourisher, the strength giver and satisfier who pours himself into our awaiting souls...As a fretful babe is strengthened and nourished from the mother’s breast, but also quieted, rested and satisfied.”
The age of weaning ranges from 2 to 4 years in many societies today.

- In Guinea Bissau, West Africa, the median time for weaning is 22.6 months.
- Mothers in India frequently breastfeed their infants until 3 or 4 years of age.
U.S. Data about Breastfeeding >1 Year

- Less than 7 percent of U.S. mothers continue to breastfeed their children at 18 months.

- A study examined natural weaning among 1,280 US children who breastfed for at least 3 years. The mean age for weaning was just over 4 years. Range: 3 - 9.5 years.

- Approximately 45% of the children weaned before 4 years of age with less than 5% weaning after 6.5 years.
What does it mean to wean?

- The ancient meaning of the word “wean” was “to ripen”.
- “Weaning was a joyous occasion because the weaned child was valued as a fulfilled child.”

Kathleen Huggins, 1994
A Natural Age of Weaning

What would be the natural age of weaning, if we were free from cultural beliefs?

Katherine Dettwyler, PhD

Department of Anthropology,
Texas A and M University
The Natural Age of Weaning

- The markers for weaning in primates and large mammals includes the following:
  - quadrupling of birth weight
  - attainment of one-third of adult weight
  - adult body size
  - gestation length
  - dental eruption
The Natural Age of Weaning

- Quadrupling of birth weight – 2.5 - 3.5 years
- One-third of adult weight – 5 - 7 years
- Gestation length – 4.5 years
- Dental eruption – 5.5 - 6 years
When a child is allowed to wean at his/her own pace without bottles, suggestions, hints, bribes, supplemental feedings, etc.
CHILD-LED WEANING

- Is a process, not an event
- Very uncommon from 12-18 months
- Usually completes on its own when a child no longer has a need to nurse for any reason
- Increases the child’s sense of control and confidence

MOTHER-LED WEANING

- Is a process, not an event
- Practiced from birth by some women
- Can occur at any time
- May affect the child’s sense of control and confidence in unknown ways
The nursing relationship changes along with the maturation of the child.

Breastfeeding is a permissive behavior and the mom’s role is active not passive.
Naming of the breasts and/or nursing behavior is common.

This objectification of mom’s breasts and/or nursing on their part demonstrates the mental distinctions they perceive between their mother and the practice.
WHEN DO BABIES, TODDLERS & CHILDREN NURSE?

- Hungry
- Thirsty
- Tired
- Sick
- Get Hurt

- Happy
- Silly
- Insecure
- Over-stimulated
- In Pain

IT DOESN'T END THERE....
Breastmilk is of value for children beyond one year and this value does not expire with age.

The act of breastfeeding is of value for mothers and children beyond one year and this value does not expire with age.

Breastfeeding is the optimal way to meet the suckling needs of a child and this effect does not expire with age.
As more solids are introduced during the second half of the first year, infants shift their primary source of nutrition from maternal milk to other foods.

- Children have no rush to achieve 100% reliance.

- As the infant takes less maternal milk during the second year, the benefits are condensed into the milk produced making this milk unique and even more valuable to the growing child.
The Impact of Words

What do these words convey?

- Still
- Already
- At least
- Extended
- Long-term
- Prolonged
Discussing Duration

- Explore the breastfeeding goals of each mother for her current infant and include her prior weaning history and/or weaning experiences of herself, family, friends, etc.

- Advocate for duration
  - Discuss breastfeeding in terms of years, not months when possible promoting longer cumulative lactation durations
  - Consider adopting the AAFP language and categorize the discontinuation of breastfeeding prior to two years as premature placing the child at higher risk for illness

- Respect the mother’s decision
“Few of us understand weaning as the great and dangerous passage it is known to be in most of the world’s societies. But when we ignore the dangers and difficulties of weaning, we risk our children’s well-being and sometimes our own.”

--Kathleen Huggins,
*The Nursing Mother’s Guide to Weaning*
Breastfeeding does matter; it matters to the individual child, the mother, the family and society.

Dr. Mary J. Houston
Mothers and Midwives: a midwife responds