Babies are Born to Breastfeed

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FDA Meeting
November 2007

The Compelling Reasons to Breastfeed

- Species Specificity
- Nutritional Advantages
- Infection Protection
- Immunological Protection
- Allergy Protection
- Psychological Benefits
Species/Class Specificity:

- The word mammal from from the Latin, ‘mammalis’ “of the breast”
- Over 15,000 species belong to this group

Child Health Benefits

“Human milk is species-specific, and all substitute feeding preparations differ markedly from it, making human milk uniquely superior for infant feeding. Exclusive breastfeeding is the reference or normative model against which all alternative feeding methods must be measured with regard to growth, health, development, and all other short- and long-term outcomes.”
“Human milk-fed premature infants receive significant benefits with respect to host protection and improved developmental outcomes compared with formula-fed premature infants.”

Infectious Diseases

Research in developed and developing countries, including middle-class populations in developed countries, provides strong evidence that human milk feeding decreases the incidence and/or severity of:

- Bacterial meningitis
- Bacteremia
- Diarrhea
- Respiratory tract infection
- Necrotizing enterocolitis
- Otitis media
- Urinary tract infection
- Late-onset sepsis in preterm infants
Why is human milk protective?

- Antibodies: SIgA, IgM, IgG
- Living cells: lymphocytes, macrophages
- Lactoferrin and gut pH suppresses E. Coli growth
- Lysozyme: bacterial and anti-inflammatory
- Prostagladins: cytoprotective
- Prolactin: enhances development of B and T lymphocytes
- Natural flora is lactobacillus

Postneonatal infant mortality rates in the United States are reduced by 21% in breastfed infants.

- Chen A, Rogan WJ. “Breastfeeding and the risk of postneonatal death in the United States.” *Pediatrics* 2004; 113(5)
Other Health Outcomes

- Decreased rates of sudden infant death syndrome in the first year of life
- Reduction in incidence of insulin-dependent (type 1) and non-insulin-dependent (type 2) diabetes mellitus
- Lymphoma, leukemia, and Hodgkin disease
- Hypercholesterolemia
- Asthma

http://www.rivm.nl/bibliotheek/rapporten/350040001.pdf
Features of Breastfeeding that Relate to Lowered Obesity Risk

- Behavioral factors
- Hormonal responses
- Bioactive factors in human milk
- Lower energy intake
- Lower protein intake

Risk of Overweight in Adolescence by Duration of Breastfeeding in Infancy

MW Gillman et al. JAMA, 2001
Food for the Brain

- Cholesterol
- Taurine
- DHA (docosahexaenoic acid)

Breastfeeding and Later Cognitive Academic Outcomes

- Birth Cohort of 1265 Children
- Followed Breastfeeding history in first year
- Cognitive Ability at 8-9 years
- Teacher Ratings at 8-12 years
- Standardized Test at 10-13 years
- High school Outcomes at 18 years
- Range of Measures of social and family factors

Horwood and Ferguson Pediatrics 1998
Breastfeeding support is the single best opportunity for pediatricians to impact a child’s life.

Anonymous
November 2006

Maternal Health Benefits: Short Term

- More rapid uterine involution
- Decreased postpartum bleeding
- Earlier return to prepregnancy weight
- Increased child spacing attributable to lactational amenorrhea
Maternal Health Benefits: Long Term

- Decreased risk of:
  - breast cancer
  - ovarian cancer
  - hip fractures and osteoporosis in the postmenopausal period
  - rheumatoid arthritis

http://www.rivm.nl/bibliotheek/rapporten/350040001.pdf
Female breast from infancy to lactation with corresponding cross section and duct structure

Diagram of ejection reflex arc
Prolactin levels after suckling

Percent increase in prolactin over baseline after suckling
Plasma prolactin measured by radioimmunoassay before, during, and after period of nursing

Pathways for milk synthesis and secretion into mammary alveolus
Key Elements of Successful Latch

- Body position mother and infant
- Presenting the breast
- Infant suckling

The magic of maternal and infant bonding.
RISK:BENEFIT

When there is:

↓ illness = ↓ clinic visits

↓ severity of illness = ↓ hospitalizations

↓ need for medical care = ↓ costs
And All This Reduces Health Care Costs.