



## THE IMPORTANCE OF BREASTFEEDING

Breastfeeding is more than just another lifestyle choice. It's an important health choice for mothers and babies, so agencies that care about health support breastfeeding. The US Department of Health and Human Services, in cooperation with the Ad Council and La Leche League International, supports an ad campaign to promote breastfeeding that began in 2004.

In 2001, The World Health Organization recommended exclusive breastfeeding for six months as the optimal way of feeding infants. Once complementary foods are added, they suggest breastfeeding may continue up to two years of age or beyond. In 1997, the American Academy of Pediatrics published a statement declaring human milk to be the preferred food for all newborns. The AAP recommends exclusive breastfeeding with no supplements for the first six months and advises that breastfeeding continue for a minimum of 12 months or as long as is mutually desired. Here are some of the reasons why La Leche League and health care agencies believe breastfeeding is important.

### PROTECTS BABIES FROM DISEASES

The frequency and severity of colds, ear infections, upper respiratory infections, and even chronic conditions such as asthma are all significantly reduced when children are breastfed. Breastfed babies suffer less from diarrhea, other gastrointestinal illnesses, pneumonia, sepsis, gastroenteritis, meningitis, and some forms of childhood cancer. Because of the reduction in frequency and severity of such illnesses, breastfed babies need fewer visits to the doctor.

Davis, M.K. Breastfeeding and chronic disease in childhood and adolescence. *Pediatr Clin N A* 2001; 48(1):125-41.

Haby, M.M. et al. Asthma in preschool children: prevalence and risk factors. *Thorax* 2001; 56:589-95.

Oddy, W.H. et al. Maternal asthma, infant feeding, and the risk of asthma in childhood. *J Allergy Clin Immunol* 2002; 110:65-7.

Scariati, P.D. et al. A longitudinal analysis of infant morbidity and the extent of breastfeeding in the United States. *Pediatrics* 1997; 99(6):e5.

### HIGHER IQS LAST INTO EARLY ADULTHOOD

Studies show differences of 5 to 10 IQ points between children breastfed as babies and children who were formula-fed. The Mortensen study cited below compared a variety of studies on intelligence, adjusting for the effects of other possible factors such as parents' level of education, mothers' smoking, and infant birth weight. Recent discoveries about docosahexanoic acid (DHA) and arachidonic acid (AA), both of which occur naturally in human milk, and the role they play in the development of the infant's brain provide clues to one possible cause of this difference.

Mortensen, E.L. et al. The association between duration of breastfeeding and adult intelligence. *JAMA* 2002; 28(15):2365-71.

Xiang, M. et al. Long-chain polyunsaturated fatty acids in human milk and brain growth during early infancy. *Acta Paediatr* 2000; 89(2):142-47.

### DOSE RESPONSE: MORE BREASTFEEDING PROVIDES MORE PROTECTION

Breastfeeding offers the greatest protection from illness when babies are receiving human milk alone; this protection declines in proportion to the amount of supplements, such as formula, cow's milk, or other foods, they receive. Babies also receive more protection the longer they are breastfed. Scientific studies call this effect a "dose response." Some conditions that show a dose response to breastfeeding are: childhood leukemia and lymphoma, ear infections, respiratory infections, diarrhea, Haemophilus influenzae (HIB), obesity and overweight, and meeting developmental milestones.

Bener, A. et al. Longer breastfeeding and protection against childhood leukemia and lymphomas. *Eur J Cancer* 2001; 337(2):234-38.

Raisler, J. et al. Breastfeeding and infant illness: A dose-response relationship? *Am J Publ Hlth* 1999; 89(1):25-30.

## DEVELOPS BABIES' IMMUNE SYSTEMS

Human milk contains immunoglobulins, leukocytes and anti-inflammatory factors that help a baby's immune system to mature after birth. The milk produced in the first few days after birth contains especially high concentrations of immune factors. Secretory immunoglobulin A (IgA), one of the live molecules present in human milk, reduces the risk of acute gastrointestinal illnesses in breastfed babies. The IgA present in human milk also stimulates the baby's immunological system to produce more SIgA. Human milk's effects on the baby's immunological system continue to protect the child even after weaning.

Feist, N. et al. Anti-endotoxin antibodies in human milk: Correlation with infection of the newborn. *Acta Paediatr* 2000; 89(9):1087-92.

Mackie, R.I. et al. Developmental microbial ecology of the neonatal gastrointestinal tract. *Am J Clin Nutr* 1999; 69(Suppl):1035S-45S.

Ronayne de Ferrer, P.A. et al. Lactoferrin levels in term and preterm milk. *J Am Coll Nutr* 2000; 19(3):370-73.

## HUMAN MILK KILLS CANCER CELLS AND OTHER DISEASE ORGANISMS

In laboratory conditions, substances in human milk have been shown to kill cells from cancers of the lung, throat, kidney, colon, and bladder, as well as lymphoma cells, leukemia cells, and pneumococcus bacteria. Other researchers have observed similar results under laboratory conditions: human milk killed or neutralized chlamydia spores, HIV, and some types of bacteria. Research on the effects of human milk has provided discoveries that have aided researchers in developing new treatments for diseases.

Jensen, R. G. et al. The anticarcinogenic conjugated fatty acid, 9c, 11t-18.2, in human milk: confirmation of its presence. *J Hum Lact* 1998; 14(1):23-27.

Lampe, M.F. et al. Killing of chlamydia trachomatis by novel antimicrobial lipids adapted from compounds in human breast milk. *Antimicro Agen Chemo* 1998; 42(5):1239-44.

Lee-Huang, S. et al. Lysozyme and Rnases as anti-HIV components in B-core preparations of human chorionic gonadotropin. *Proc Natl Acad Sci USA* 1999; 96:2678-81.

## FAMILIES AND COMMUNITIES REAP THE BENEFITS

Breastfeeding reduces financial pressures on families and on communities. In addition to the fact that human milk is essentially free, breastfeeding reduces family health care costs. Studies of mothers and infants in governmental assistance programs suggest savings for each family of between \$200 and \$800, depending on the length of time the baby is breastfed.

Community resources used to feed those in need can be stretched further when low-income mothers breastfeed. When babies are breastfed, both mother and baby are

healthier throughout their lives. Breastfeeding improves public health and reduces the financial burden on hospitals, insurance companies, and governmental assistance programs.

Ball, T.M., Bennet, D.M. The economic impact of breastfeeding. *Pediatric Clinics of North America* 2001; 48(1):253-62.

Fok, D. et al. The economics of breastfeeding in Singapore. *Breastfeed Rev* 1998; 6(2):5-9.

Montgomery, D.L. et al. Economic benefit of breast-feeding infants enrolled in WIC. *J Am Diet Assoc* 1997; 97(4):379-85.

## THE ENVIRONMENT BENEFITS

Breastfeeding uses none of the metal, paper, plastic, or energy necessary for preparing, packaging, and transporting artificial baby milks and feeding devices. Since human milk is more fully utilized by the baby, each breastfed baby cuts down on pollution and waste disposal problems. In addition, research shows that exclusive breastfeeding naturally spaces pregnancies. Although we live in a polluted world, scientists agree that human milk is still the very best food to nourish human babies, and it may even protect babies from some of the effects of pollution.

Lovelady, C.A. et al. Weight change during lactation does not alter the concentrations of chlorinated organic contaminants in breast milk of women with low exposure. *J Hum Lact* 1999; 15(4):307-15.

## FURTHER RESOURCES

THE WOMANLY ART OF BREASTFEEDING. Schaumburg, IL: LLLI, 1997.

THE BREASTFEEDING ANSWER BOOK. Schaumburg, IL: LLLI, 2003.

For breastfeeding support, to order publications, or to find an LLL Leader near you, use our Web site at: [www.lalecheleague.org](http://www.lalecheleague.org) Or phone: 800 LA LECHE (9-5 Central Time) 847-519-7730 (24-hour messages)