HUMAN milk banking ASSOCIATION OF NORTH AMERICA

The Value of Human Milk

HMBANA Position Paper on Donor Milk Banking

Human milk is the standard food for infants and young children including premature and sick newborns with rare exceptions.[1,2] Human milk provides optimal nutrition, promotes normal growth and development, and reduces the risk of illness and disease.[3] The unique composition of human milk includes nutrients, enzymes, growth factors, hormones, and immunological and anti-inflammatory properties that have not been duplicated.[4] Exclusive breastfeeding for six months is recommended with introduction of complementary nutritionally adequate foods at about this time. Optimally breast milk remains in the diet for two years and beyond.[1] In situations where mothers' own milk is not available, provision of pasteurized, screened donor milk is the next best option particularly for ill, or high-risk infants.[5]

Current research regarding human milk

Human milk is species specific and provides unique benefits.[4] These include health, nutritional, immunological, developmental, social, economic and environmental benefits[2]. The health benefits including long term decreased risk of a wide range of illnesses and infections last beyond infancy.[6,7,8]

Feeding human milk results in both short and long term health care cost savings.[9,10,11,12,13]

Current research regarding pasteurized donor milk

Most bioactive properties found in human milk remain viable after pasteurization.[14,15]

Pasteurized donor milk for premature and high risk infants has been shown to reduce the incidence of necrotizing enterocolitis, sepsis, and infection, resulting in shorter hospital stays.[13,16,17,18,19]

Donor milk has been reported to be effective for nutritional uses, post surgical treatment and provision of immunological benefits. Patients with varied comditions including bowel surgery (oomphalocele, gastroschisis), failure to thrive, formula intolerance, suppressed IgA levels (treated post liver transplantation), allergies, chronic renal failure, leukemia, intractable pneumonia, and HIV have responded positively to the use of donor milk.[20,21,22,23,24,25,26,27,28]

In order to provide a safe product and maintain the maximum active beneficial components, processing and dispensing should be done in accordance with the Guidelines from the Human Milk Banking Association of North America.[29]

The rights of mothers and infants

Every mother has the right to information on the benefits of human milk, both maternal and banked pasteurized donor milk.[30]

Every mother has the right to information on the risks of infant formula including contamination, possible errors and omissions in composition, importance of careful handling, preparation and storage and the associated costs of use.

Every mother has the right make an informed choice about infant feeding and have her choice respected and supported.

Every infant has the right to access banked pasteurized donor milk when maternal milk is unavailable.

Every infant has the right to the highest attainable standard of health.[30]

Availability of pasteurized donor milk

Donor milk banks should be established in states/provinces/territories or geographic regions depending on population in order to meet the needs of North American children, particularly those who are at high risk (ill or premature) when maternal milk is unavailable.

Establishing additional donor milk banks provides accessibility to and availability of donor milk for families and is a safe, ethical and cost effective method of encouraging optimal health.

Therefore health professionals are encouraged

To advocate for:

- The establishment of donor milk banks in their state/province/territory/region.
- Information to enable mothers to make informed choices.
- Mothers' informed choices to be supported and respected.
- Human milk to be respected for its value.
- Implementation of the Baby-Friendly Initiative and the International Code of Marketing of Breast Milk Substitutes.
- Third party payment for donor milk processing fees.

In practice to:

- Use evidence based care and be familiar with the literature on the benefits of human milk, donor milk banking, and the risks of formula feeding.

- Provide education using non proprietary information and counseling about all infant feeding choices and skilled help to support breastfeeding.
- Ensure mothers make informed choices about infant feeding and are supported in those choices.
- Provide information on the risks of using non screened donor milk.
- To undertake research on:
- Optimal storage and handling of human milk, including processing of donor milk.
- Benefits and cost savings of using donor milk.
- Donor milk; submitting case reports and other relevant information for publication.

To provide leadership through:

- Partnership and collaboration to influence change in the health care system.
- Encouragement of development of agency policies in support of the use of donor milk.

References

1. WHO resolution 54.2, May 18, 2001.
2. American Academy of Pediatrics. Breastfeeding and the use of human milk. Pediatrics, 1997; 100: 1035-1038.
3. Picciano, M. F. (2001). Nutrient composition of human milk. Pediatric Clinics of North America, 48. 1, 53-67.
4. Hamosh, M. (2001). Bioactive factors in human milk. Pediatric Clinics of North America, 48. 1, 69-86.
5. WHO/UNICEF Joint statement: meeting on infant and young child feedings. (1980). J Nur Midwife, 25, 31.
6. Hanson, L.A. (1999). Human milk and host defense: immediate and long-term effects. Acta Paediatr, 88, 42-46.
7. Davies, M. (2001). Breastfeeding and chronic disease in childhood and adolescence. Pediatric Clinics of North America, 48, 1, 125141.
8. Singhal, A., Cole, T., J., Lucas, A. Early nutrition in preterm infants and later blood pressure: two cohorts after randomized trials. Lancet, 2001; 357:413-419.
9. Ball, T.M., Wright, A.L. (1999). Health care costs of formula-feeding in the first year of life. Pediatrics, 103, 4, 870-876.
10. Riordan (1997). The cost of not breastfeeding. A commentary. JHL, 13, 2, 93-97.
11. Arnold, L.D. (1998). Cost savings through the use of donor milk: case histories. JHL,14, 3, 255-258.

12. Arnold, L.D. (2002). The cost-effectiveness of using banked donor milk in the neonatal intensive care unit: prevention of necrotizing enterocolitis. JHL, 18, 2, 172-177.

13. Wright, N. (2001). Donor human milk for preterm infants. J. of Perinatology, 21, 1-6.

14. Tully, D., Jones, F., Tully, M.R. (2001). Donor milk: what's in it and what's not. JHL, 17, 2, 152-155.

15. Wallingford, J. Effects of pasteurization on anti-infective agents and other proponents of human milk. Presentation at the HMBANA Annual Conference; 1989.

16. Lucas, A., Morley, R., Cole, T.J., Gore, S.M. (1994). A randomized multicentre study of human milk versus formula and later development in preterm infants. Archives of Disease in Childhood, 70, f, 141-146.

17. Naranyanan, I., Prakashil, K., Bela, S., Verna, R.K., Gujral, W. (1980). Partial supplementation with expressed breast-milk for prevention of infection in low-birth-weight infants. Lancet, 13, 11, 561-563.

18. Naranyanan, I., Prakashil, K., Gujral, W. (1981). The value of human milk in the prevention of infection in the high-risk low-birth-weight infant. J. Pediatr., 99, 3, 496-498.

19. Naranyanan, I., Prakashil, K., Murphy, N.S. et al. (1984). Randomized controlled trial of affect of raw and holder pasteurized human milk and formula supplements on the incidence of neonatal infection. Lancet, ii, 8412, 111-1113.

20. Arnold, L.D. (1990). Clinical uses of donor milk. JHL, 6, 3, 132-133.

21. Arnold, L.D. (1993b). Human milk for premature infants: an important health issue. JHL, 9, 2, 121-123.

22. Arnold, L.D. (1995c). Use of donor milk in the treatment of metabolic disorders: glycolytic pathway defects. JHL, 11, 1, 51-53.

23. Arnold, L.D. (1995b). Use of donor milk in the management of failure to thrive: case histories. JHL, 11, 2, 137-140.

24. Asquith, M.T. Pedrotti, P., Stevenson, D., Sunshine, P. (1987). Clinical uses, collection, and banking of human milk. Clinics in Perinatology, 14, 1, 173-185.

25. Merhav, J., Wright, I., Mieles, A., Van Theil, D. (1995). Treatment of IgA deficiency in liver transplants with human breast milk. Trans Int, 8, 4, 327-329.

26. Ridell, D.G. (1989, October). Use of banked milk for feeding infants with bdominal wall defects. Presentation. Annual HMBANA meeting. Vancouver, B.C.

27. Tully, M.R. (1990). Banked human milk in the treatment of IgA deficiency and allergy sypmptoms. JHL, 6, 2, 75-77.

28. Wiggins, P.K. Arnold, L.D. (1998). Clinical case history: donor milk use for severe gastroesophageal reflux in an adult. JHL, 14, 2, 157-159.

29. Human Milk Banking Association of North America (HMBANA, 2000). Guidelines for the establishment and operation of a human donor milk bank Denver; Author.

30. United Nations. (1989). Convention on the Rights of the Child. Human Rights Directorate, Department of Canadian Heritage. Quebec.