

Human milk is an amazingly complex living liquid and a diverse matrix of nutritional and bioactive compounds. Nutrition in early life can significantly impact growth and development in immediate and later life ⁽¹⁾.



Human milk oligosaccharides (HMOs) are the third most abundant solid component of BM ⁽²⁾, approximately 12–15 g/L in mature human milk^(3,4).

Among the different types of HMOs present in mature human milk, 2-Fucosyllactose (2'-FL) is most abundantly found i.e. around 2 g/L ⁽⁵⁾.



HMOs are pools of complex carbohydrates which are present as short chain oligosaccharides and long chain oligosaccharides in a ratio 9:1 ⁽⁶⁾.

There are more than 1000 structurally different HMOs working together to deliver a combined beneficial effect, of which today more than 162 types have been characterized in detail ⁽⁷⁾.



Combination of scGOS/lcFOS (9:1) helps mimics more than 100 oligosaccharide structures ⁽¹⁾. Overall, the combination of scGOS/lcFOS (9:1) and HMO (2'-FL) brings the HMO quantity and diversity closer to that found in human milk and providing maximum functional benefits[#].



BUILDS RESILIENT IMMUNITY ^{^8-11}

BOOSTS GUT HEALTH ^{§12,13}



SUPPORTS GROWTH ^{^9}

PROMOTES COGNITIVE DEVELOPMENT ¹⁴



References:

- Salminen et al. Nutrients,2020; 12(7), 1952., 2. Wegh et al. Int. J. Mol. Sci. 2019; 20, 4673, 3. Thurl et al. Glycoconj. J. 1997; 14, 795–799, 4. Thurl et al. Nutr. Rev. 2017; 75, 920–933
 - Soyyilmaz B et al. Nutrients 2021,13,2737., 6. Fanaro et al. Acta paediatrica, 2005; 94; 22-26, 7. Urashima et al., 2018, 8. Berger B et al. mBio 2020;11:(2).11:e03196-19.
 - Puccio G, et al. J Pediatr Gastroenterol Nutr.2017;64(4):624-631., 10. Arslanoglu S, et al. J Nutr. 2007;137(11):2420-4., 11. Ivakhnenko OS, et al. Pediaatria Polska. 2013;1;88(5):398–404.
 - Moro et al., JPGN 2002;34:291–5., 13. Knol et al. Acta Paediatr Suppl, 2005;94(449):31-3., 14. Berger P et al. Nutrients 2022, 14, 3820.
- [^] Based on parent reported adverse events
[§] GOS/FOS evidence
[#] Data on file

Disclaimer: The views and opinions expressed are those of the speaker.

IMPORTANT NOTICE: MOTHER'S MILK IS BEST FOR YOUR BABY

The World Health Organization (WHO)* has recommended that pregnant women and new mothers be informed of the benefits and superiority of breast-feeding, in particular, the fact that it provides the best nutrition and protection from illness for babies. Mothers should be given guidance on the preparation for and maintenance of lactation, with special emphasis on the importance of the well-balanced diet both during pregnancy and after delivery. Unnecessary introduction of partial bottle feeding or other foods and drinks should be discouraged since it will have a negative effect on breast-feeding. Similarly, mothers should be warned of the difficulty of reversing a decision not to breastfeed. Before advising a mother to use an infant formula, she should be advised of the social and financial implications of her decision. For example, if a baby is exclusively bottle-fed, more than one can (500g) per week will be needed, so the family circumstances and cost should be kept in mind. Mother should be reminded that breast milk is not only the best but also the most economical food for babies. If a decision to use infant formula is taken, it is important to give instruction on correct preparation methods, emphasizing that unboiled water, unsterilized bottles or incorrect dilution can lead to illness.

*See: International Code of Marketing of Breast Milk Substitutes, adopted by the World Health Assembly in Resolution WHA 34.22, May 1981.

Importance of Breastfeeding:

(i) Immediately after delivery, breast milk is yellowish and sticky. This milk is called colostrum, which is secreted during the first week of delivery. Colostrum is more nutritious than mature milk because it contains more protein, more anti-infective properties which are of great importance for the infant's defense against dangerous neonatal infections. It also contains higher levels of Vitamin 'A'; (ii) breast milk- A) is a complete and balanced food and provides all the nutrients needed by the infant [for the first six months of life] (B) has anti-infective properties that protect the infants from infection in the early months (C) is always available; (D) needs no utensils or water (which might, carry germs) or fuel for its preparation, (iii) breastfeeding is much cheaper than feeding infant milk substitutes as the cost of the extra food needed by the mother is negligible compared to the cost of feeding infant milk substitutes, (iv) mothers who breast-feed usually have longer periods of infertility after child birth than non-lactators; (b) details of management of breast feeding, as under:- (i) breast-feeding- (A) immediately after delivery enables the contraction of the womb and helps the mother to regain her figure quickly; (B) is successful when the infant suckles frequently and the mother wanting to breast-feed is confident in her ability to do so (ii) in order to promote and support breast-feeding the mother's natural desire to breast feed should always be encouraged by giving, where needed, practical advice and making sure that she has the support of her relatives. (iii) adequate care for the breast and nipples should be taken during pregnancy. (iv) it is also necessary to put the infant to the breast as soon as possible after delivery, (v) let the mother and the infant stay together after the delivery, the mother and her infant should be allowed to stay together (in hospital, this is called "rooming-in"); (vi) give the infant colostrum as it is rich in many nutrients and anti-infective factors protecting the infants from infections during the few days of its birth; (vii) the practice of discarding colostrum and giving sugar water, honey water, butter or other concoctions instead of colostrum should be very strongly discouraged; (viii) let the infants suckle on demand; (ix) every effort should be made to breast-feed the infants whenever they cry; (x) mother should keep her body and clothes and that of the infant always neat and clean. Breast-feeding is the best form of nutrition for babies and provides many benefits to babies and mothers. It is important that, in preparation for and during breast-feeding, you eat a healthy, balanced diet. Combined breast and bottle-feeding in the first weeks of life may reduce the supply of your own breast-milk and reversing the decision not to breast-feed is difficult. Always consult your Healthcare Professional for advice about feeding your baby. The social and financial implications of using infant formula should be considered. Improper use of an infant formula or inappropriate foods or feeding methods may present a health hazard. If you use infant formula, you should follow manufacturer's instructions for use carefully - failure to follow the instructions may make your baby ill.

IMPORTANT NOTICE

Breast milk is best for babies. At Danone, we support breast feeding and believe that breast milk is the best food for babies as the sole source of nutrition for the first 6 months of life and is recommended to be continued until 2 years with the introduction of appropriate complementary foods after 6 months of age.

IMPORTANT NOTICE: Breastfeeding is the best for babies and a healthy diet / maternal nutrition is important when breastfeeding. A decision not to breastfeed can be difficult to reverse. Infant formula is suitable from birth when babies are not breastfed. It is recommended that all formula milks be used on the advice of a doctor, midwife, health visitor, public health nurse, dietitian, pharmacist, or other professional responsible for maternal and child-care and the financial implications should be considered. All preparation and feeding instructions should be followed carefully as inappropriate preparation could lead to health hazards. This is the same as the above - does this need to be included

For the use of healthcare professionals only, not for distribution to general public.

Published by: Nutricia International Pvt. Ltd. Building A, unit no. 304, 3rd Floor, Agastya Corporate Park, Kamani Junction, L.B.S. Marg, Opp. Fire Brigade, Kurla (West), Mumbai 400070

Date of Publishing: 15th October 2021