

PRESS INFORMATION

11th International Breastfeeding and Lactation Symposium 2016

Human milk: the natural combination of nutrition and health protection

Human milk enhances brain development

Breastfeeding protects the health of mother and child

Baar/Berlin, 15/16 April 2016. Human milk is the natural food for infants. At Medela's 11th International Breastfeeding and Lactation Symposium in Berlin, leading international scientists presented the latest research results in the area of human milk. Babies who are breastfed benefit from the unique components of human milk in several different ways: they do not suffer as frequently from infections of the respiratory tract, the gastrointestinal tract and the urinary tract; they are better protected against becoming overweight and non-communicable chronic diseases in later life; and their brain development is positively influenced. But breastfeeding is not just good for babies – it also has benefits for maternal health.

As well as containing the optimum amounts of energy and the right composition of nutrients for the individual baby, human milk also contains a large number of bioactive components such as hormones, growth factors, and anti-inflammatory and immunomodulatory components. What is more, human milk is unique with regard to the amount of polysaccharides (oligosaccharides) present: no other kind of milk contains these sugars in a similar amount and complexity. Until recently, it was assumed that these oligosaccharides were simply food for the microorganisms in the gut. However, new studies show that they actually make an important contribution to infant health. As Professor Lars Bode (San Diego, USA) explained, they prevent pathogens from attaching to mucous membranes, have an antibacterial effect and have a positive influence on the immune system. This means that they protect against infections, including necrotising enterocolitis – a much-feared illness that affects preterm babies.

Fats for the brain

The high content of long-chain fatty acids in human milk is considered especially conducive to brain development. The polyunsaturated long-chain fatty acids docosahexaenoic acid (DHA) and arachidonic acid are present in larger amounts in human milk than in infant formula. Together they make up around 20 per cent of the share of fatty acids in the brain and play an important role in building nerve tissue. Large-scale epidemiological studies have shown that feeding a baby human milk is linked to a higher IQ and improved cognitive abilities in later childhood and youth. A research group led by Dr Sean Deoni (Providence, USA) wanted to find out exactly when these differences become apparent. The

researchers examined the brains of 133 full-term, healthy babies and young children aged between ten months and four years, who had either been exclusively breastfed for at least three months, had received human milk in combination with formula milk, or had only received formula milk. The brain scans were carried out using quiet MRI technology while the babies were asleep. The result: in the infants that had only been fed human milk, the brain was considerably better developed in the regions responsible for language, emotion and cognition.

Protection against non-communicable chronic diseases

Non-communicable chronic diseases such as cardiovascular diseases, cancer, respiratory diseases and diabetes mellitus lead to more than 38 million deaths around the world each year. Professor Donna Geddes (Crawley, Australia) stressed that early childhood plays a key role in the prevention of diseases. Studies show that children who are breastfed are less likely to become overweight in later life than those who are not breastfed. Various factors contribute to this, including the composition of human milk and the appetite-controlling hormones it contains. In addition, infants that are breastfed gain weight more slowly, which seems to reduce the risk of them becoming overweight in later life. Various studies suggest that breastfeeding duration influences both the weight of the infant and the risk of becoming overweight in later life.

Maternal health benefits

Maternal health is also positively influenced by breastfeeding: the uterus recovers more quickly after delivery, menstruation is often absent during the breastfeeding phase, and the mother's bodyweight returns to normal more quickly. Breastfeeding also affects the mother's metabolism in the long term and her risk of suffering from cardiovascular diseases, breast cancer and ovarian cancer is reduced.