PHILIPS
AVENT

Mother & Childcare

For professionals

Philips Avent Scientific Symposium 2017

Symposium booklet

More breastmilk for more babies:
from physiology to practice

16th and 17th February 2017
London, United Kingdom

Table of contents

Introduction

Dear Guest, It is a great pleasure to welcome you in London for the first Global Philips Avent Scientific Symposium. Over 80 participants have travelled here from more than 20 countries and covering all continents to join in the discussion on breastfeeding.

Since 1984, Philips Avent has been working with a global network of trusted partners including scientific experts, research institutes, healthcare professionals and parents. We are committed to bringing the newest research in the fields of breastfeeding, infant feeding and development, to healthcare professionals and parents, and to translating key concepts into innovatively designed products and services.

The healthcare landscape is evolving, and personal and professional healthcare worlds are converging. Traditional models of care are being challenged and people are becoming more engaged in their own healthcare. Digital technologies and wireless capabilities are transforming healthcare – from the hospital to the home and beyond - aiming to improve outcomes as well as drive improved quality, cost efficiency and operational performance across healthcare systems.

Over the next two days you will explore the latest science in breastfeeding and collaborate, build and discuss the latest thinking on practical aspects of breastfeeding, infant feeding and milk expression practices.

In this booklet you will find detailed information about the program such as: agenda, accommodation and the city of London. In case you require assistance or have any specific requirements, please don't hesitate to approach us.

We look forward to your active participation, sharing and learning amongst each other from around the globe, and together delivering more breastmilk for more babies.

Please enjoy the symposium.

Kind regards

Dr. Victoria Davies
On behalf of the Philips Avent, Mother & Childcare Team

Symposium agenda 16th and 17th February 2017

Day 1: Thursday

11:00 – 13:00	Registration and lunch reception
13:00 – 13:30	**Dr. Victoria Davies and Prof. Mary Fewtrell** *Opening ceremony*
Speakers	
13:30 – 14:15	**Dr. Olav Oftedal** *Evolution of lactation and adaptation in humans*
14:15 – 15:00	**Prof. Atul Singhal** *The importance of human milk for the long term health of term infants*
Break: 30 minutes	
15:30 – 16:15	**Dr. Nicholas D. Embleton** *The importance of human milk for the preterm infant*
16:15 – 17:00	**Ms. Silke Mader** *Breastfeeding a preterm infant in the NICU – the unmet needs for parents*
Break: 1 hour	
18:00 – 19:00	Drinks in the Hunterian Museum
19:00 – 21:30	Dinner in the Council Hall

Day 2: Friday

8:30 – 8:45	Introduction recap of day 1 and description of day 2
8:45 – 9:40	**Prof. Jane Scott** *The impact of digital technologies on breastfeeding practice*
Workshops: 2 hours 30 minutes	
Group 1 *Complicated births and breastfeeding*	**Prof. Guido Moro** *Presence of a human milk bank is associated with an increased rate of breastfeeding in VLBW infants*
Group 2 *Educating and supporting mothers with breastfeeding*	**Dr. Hannakaisa Niela-Vilen** *Supporting mothers to breastfeed their preterm infant*
Group 3 *Common challenges in breastfeeding practice*	**Ms. Becky White** *Milk Man: a breastfeeding app for fathers.*
Lunch: 1 hour	
Speakers	
13:30 – 14:30	**Prof. Mary Fewtrell** *The application of physiology for optimising collection and expression of breast milk*
14:30 – 15:15	**Dr. Husna Shukri** *The use of relaxation in breastfeeding*
Break: 30 minutes	
15:45 – 16:30	Summary of workshops
16:30 – 17:00	Closing

Welcome to London

London, the capital of England and the United Kingdom, is a 21st-century city with history stretching back to Roman times. At its centre stand the imposing Houses of Parliament, the iconic 'Big Ben' clock tower and Westminster Abbey, site of British monarch coronations. Across the Thames River, the London Eye observation wheel provides panoramic views of the South Bank cultural complex, and the entire city.

London is also home to many museums, galleries, and other institutions, many of which are free of admission charges and are major tourist attractions. The first of these to be established was the British Museum in Bloomsbury which is next to the hotel and venue.



Hotel Location & Bio

Set in London's creative Bloomsbury district, this elegant hotel is 0.1 miles from Tottenham Court Road tube station and 0.2 miles from the British Museum.

Characterful, cultured and calm, the Radisson Blue Edwardian, Kenilworth is warmly inviting and quietly stylish in the heart of Bloomsbury. Light floods the airy lobby and laid-back bar through elegant arched windows. The striking original art collection adds real individuality. Service is unfailingly friendly, and you're equally well-placed here for the City or the West End.

Radisson Blu Edwardian, Kenilworth
97 Great Russell St, Fitzrovia, London WC1B 3BL

Wi-Fi
Username: Radisson Blu Guest
Password: No password needed

Radisson Blu Edwardian Bloomsbury Street Hotel
9-13 Bloomsbury St, Fitzrovia, London WC1B 3QD

Wi-Fi
Username: Radisson Blu Guest
Password: No password needed

Venue

Royal College of Surgeons

As one of the world's leading surgical institutions, the College has been based at Lincoln's Inn Fields since 1797.

Today the elegant building not only represents an institution at the forefront of surgical education and training, but also serves as an outstanding venue for conferences, meetings and banquets.

Wi-Fi

Username: rcsevents
Password: lecture21

Huntarian museum

The Hunterian Museum boasts unrivalled collections of anatomical and pathological specimens, models, instruments, painting and sculptures.

John Hunter Fellow of the Royal Society (13 February 1728 – 16 October 1793) was a Scottish surgeon, one of the most distinguished scientists and surgeons of his day. He was an early advocate of careful observation and scientific method in medicine. He was a teacher of, friend of, and collaborator with, Edward Jenner, the inventor of the smallpox vaccine. His wife, Anne Hunter (née Home), was a minor poet, some of whose poems were set to music by Joseph Haydn.

Symposium agenda 16th February 2017

Day 1: Thursday	
11:00 – 13:00	Registration and lunch reception
13:00 – 13:30	**Dr. Victoria Davies and Prof. Mary Fewtrell** *Opening ceremony*
Speakers	
13:30 – 14:15	**Dr. Olav Oftedal** *Evolution of lactation and adaptation in humans*
14:15 – 15:00	**Prof. Atul Singhal** *The importance of human milk for the long term health of term infants*
Break: 30 minutes	
15:30 – 16:15	**Dr. Nicholas D. Embleton** *The importance of human milk for the preterm infant*
16:15 – 17:00	**Ms. Silke Mader** *Breastfeeding a preterm infant in the NICU – the unmet needs for parents*
Break: 1 hour	
18:00 – 19:00	Drinks in the Hunterian Museum
19:00 – 21:30	Dinner in the Council Hall

Prof. Olav Oftedal

Smithsonian Environmental Research Center

Dr. Olav T. Oftedal, Emeritus Scientist of Nutritional Ecology, Smithsonian Environmental Research Center, Edgewater, Maryland USA

Dr. Olav Oftedal is a comparative nutritionist and comparative lactation expert. He studied evolutionary biology at Harvard College, and received a PhD in nutrition from Cornell University in 1981. He worked as research nutritionist at the Smithsonian National Zoological Park in Washington DC for 30 years, was instrumental in founding the Comparative Nutrition Society and served on the National Academy of Science's Committee on Animal Nutrition. He remains active in research as an emeritus scientist associated with the Smithsonian Environmental Research Center in Edgewater, Maryland USA. His current research interests include the evolution of the mammary gland, the evolutionary origin of breast milk constituents, species differences in milk oligosaccharides, and lactation strategies of diverse mammals. He has published more than 150 scientific publications, mostly on milk, lactation and nutrition of diverse species.

Prof. Atul Singhal

University College London Institute of Child Health

Atul Singhal is a Professor in Paediatric Nutrition at the University College London Institute of Child Health, and Honorary Consultant Paediatrician at Great-Ormond Street Hospital. He graduated in Medicine from the Royal Free Hospital, London in 1986 and has been a consultant in paediatrics since 1998. Previously, he was the Director and Deputy Director of the Childhood Nutrition Research Centre, UCL Institute of Child Health.

He has broad interests in paediatric nutrition, but his current research focuses on the influence of early nutrition for long-term health, the effects of nutritional interventions to reduce long-term cardiovascular risk, and nutritional interventions for obesity.

The importance of human milk for the long term health of term infants

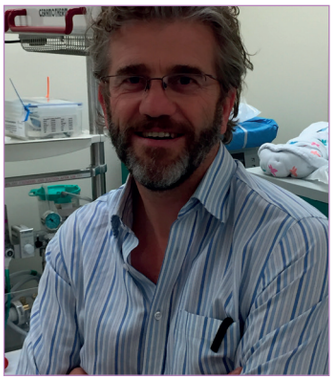
The idea that nutrition may act during a critical window early in development to permanently affect, or 'program' (1), long-term health first emerged from studies in animals (2), but is now strongly supported in humans. Nutrition throughout the life course, including fetal life, infancy, the preschool, or toddlers years, and in adolescence impacts on long-term health, a hypothesis known as the developmental origins of adult disease hypothesis (3), based on the concept of nutritional programming.

In humans, the strongest evidence for nutritional programming has been obtained for the long-term benefits of breast-feeding. Breast-feeding, not only has benefits for short-term health, but has been shown to have major advantages for long-term cognitive function (4,5), atopic disease6, bone health (7) and risk of obesity (8,9) and cardiovascular disease (10). There is particularly strong evidence that breast-feeding can improve later cognitive development, a hypothesis supported by several systematic reviews, evidence of a dose-response association (11), data from a cluster randomised trial (12), as well as evidence of benefits of breast-feeding on visual development (13) and structure of the brain (11,14). The mechanisms for these effects are uncertain, but include differences between human milk and formula in concentrations of biologically active factors such as nucleotides (13), lipids, and the milk fat globular membrane, and differences in patterns of growth (15).

This presentation will give an overview of the role of human milk intake on long-term health, focusing particularly on benefits for cognitive function and risk of obesity (13,14). It will highlight the key role of promoting exclusive breast-feeding (13), optimising the pattern of infant weight gain (15), and the importance of experimental (randomised) studies in interpreting the effects of early nutrition on later health. Finally, it will consider the implications of nutritional programming for nutritional, clinical and public health practice.

References

1. Lucas A. Programming by early nutrition in man. The childhood environment and adult disease. CIBA Foundation symposium 156. Bock GR and Whelan J. Whiley, Chichester; 1991; 38-55.
2. McCay CM: Is longevity compatible with optimum growth? Science 1933; 77: 410–411.
3. Bateson P, et al. Developmental plasticity and human health. Nature 2004; 430: 419-21.
4. Isaacs EB, et al. Early diet and general cognitive outcome at adolescence in children born at or below 30 weeks gestation. J Pediatr 2009; 155: 229-234.
5. Belfort MB, et al. Infant feeding and childhood cognition at ages 3 and 7 years: effects of breastfeeding duration and exclusivity. JAMA Pediatr 2013; 455: 836-888.
6. Kramer MS. Breastfeeding and allergy: the evidence. Ann Nutr Metab 2011; 59 Suppl 1:20-6.
7. Fewtrell MS, et al Early diet and peak bone mass: 20 year follow-up of a randomized trial of early diet in infants born preterm. Bone 2009; 45:142-9.
8. Patro-Gołąb B, et al. Nutritional interventions or exposures in infants and children aged up to 3 years and their effects on subsequent risk of overweight, obesity and body fat: a systematic review of systematic reviews. Obes Rev. 2016 ; 17:1245-1257.
9. Woo Baidal JA, et al. Risk factors for childhood obesity in the first 1,000 days; a systematic review. Am J Prev Med 2016; 50: 761–779.
10. Singhal A. The role of infant nutrition in the global epidemic of non-communicable disease. Proc Nutr Soc 2016; 75: 162–168.
11. Isaacs EB, et al. Impact of breast milk on intelligence quotient, brain size, and white matter development. Pediatr Res 2010;67: 357-62.
12. Kramer MS, et al. PROBIT Study Group (Promotion of Breastfeeding Intervention Trial). Promotion of Breastfeeding Intervention Trial (PROBIT): a randomized trial in the Republic of Belarus. JAMA. 2001;285:413-420.
13. Singhal A, et al. Infant nutrition and stereoacuity at age 4-6 years. Am J Clin Nutr 2007: 85: 152 -159.
14. Sean CL, et al. Breastfeeding and early white matter development: A cross-sectional study. NeuroImage 2013; 82: 77–86.
15. Singhal A, et al. Early origins of cardiovascular disease; is there a unifying hypothesis? Lancet 2004; 363:1642-5.



Dr. Nicholas D. Embleton

Newcastle Hospitals NHS Foundation Trust

Dr Nicholas Embleton is Consultant Neonatal Paediatrician, Newcastle Hospitals NHS Foundation Trust, and Honorary Reader in Neonatal Medicine, Newcastle University, Newcastle upon Tyne, UK. He qualified in medicine in 1990 and has developed a broad portfolio of translational research (see www.neonatalresearch.net). These include large-scale NIHR funded collaborative trials of feeding and immunonutrients (lactoferrin) in the UK that are recruiting ~5000 preterm infants (www.npeu.ox.ac.uk/elfin), along with mechanistic microbiomic and metabolomic studies (MAGPIE study) funded by the MRC/EME. In addition, he coordinates the Newcastle Preterm Birth Growth study that has tracked the growth and metabolic outcomes of children who were born preterm into late adolescence, including measures of insulin sensitivity, body composition, and muscle function, along with epigenetic correlates. He is also clinical lead for a series of qualitative studies exploring the experiences of parents (and the staff who cared for them) who suffered a reproductive or neonatal loss (the Butterfly project). He is a member of European Society of Pediatric Gastroenterology, Hepatology and Nutrition Committee of Nutrition, chaired the British Association of Perinatal Medicine working party on donor expressed breast milk (2016), and is chair of the UK based multi-disciplinary Neonatal Nutrition Network (N3). Further information on research projects, publications, presentations are available on the website as well as links to guidelines and education for staff in the area of twin loss. (www.neonatalresearch.net/butterfly-project)

The Importance of Human Milk for the Preterm Infant

There are overwhelming data to show that human breast milk is superior to formula milk when considering a range of outcomes in term born infants. Fortunately, many of these benefits are even greater in infants born preterm. Whilst there is continued uncertainty over the precise role of donor expressed breast milk, existing data are consistent and continue to show that maximising the duration and amount of mother's own breast milk that infants receive will result in better outcomes. Preterm infants who receive mother's own milk have lower rates of sepsis and necrotising enterocolitis, and better neuro-cognitive outcomes. Breast milk is a complex biological mixture that will never be replicated by cow's milk based artificial formula. In addition, the structures of key human milk proteins and lipids are different to those from bovine milk. However, many of the human milk constituents also have 'functional' properties meaning they exert a beneficial effect over and above that provided by the micro- or macronutrient content alone. This presentation will consider some of the functional properties of breast milk including lactoferrin, live bacteria and human milk oligosaccharides (HMOs) and how they might interact with the immune system in the developing gastro-intestinal tract to promote 'gut health'. The talk will discuss potential roles of nutrients such as lactoferrin, the ingestion and metabolic function of HMOs and how they 'feed' beneficial bacteria such as Bifidobacteria. These elements will also be considered alongside the potential contribution of bacteria naturally present in breast milk, and how these may interact to 'shape' a healthy pattern of gut bacteria (the gut 'microbiota') for preterm infants.

Ms. Silke Mader

European Foundation for the Care of Newborn Infants

Silke Mader is the Chairwoman of the Executive Board and co-founder of EFCNI. Her professional background lies in elementary educational theory, mainly focusing on the linguistic support of migrant children and remedial educational theory.

In 1997, her twins were born in the 25th week of pregnancy, and were not given the appropriate care. Unfortunately, one of them died a few days after birth, leaving the parents and the sibling behind. During her time in hospital and afterwards, she was faced with the non-existence of support of any kind, the absence of public awareness and the lack of information and education for parents during pregnancy. She felt that no parents should ever undergo such an awful experience again. Therefore, in 1999, she decided to actively participate in the Munich-based local parent group, which she headed from 2001 on. Two years later, she became Chairwoman of the German umbrella organization “The preterm born child e. V.”. Together with experts, Silke developed declarations, guidelines and information material for parents with preterm children.

As the situation throughout Europe is distressingly similar and preterm children urgently need a voice not only within Europe but also worldwide, she decided to give up her job as a teacher and to take on the role of chair on the Executive Board of EFCNI.

In 2012 Silke Mader was awarded the “Prix Courage” by ZDF television programme “ML mona lisa” in cooperation with the cosmetics company Clarins. 2013 she received the Medal for Particular Services to Bavaria in a United Europe. Since 2014 she is Honorary Lecturer at the School of Nursing and Midwifery, Queen’s University Belfast, Northern Ireland.

In 2015, Silke Mader has been awarded as social entrepreneur and Ashoka Fellow. Since then, she has become a member of the organization’s global network.

At the ALL Ladies League (ALL) – Women Economic Forum 2016 in New Delhi, India, Silke Mader received the “Iconic Innovative Trailblazer of the Decade” award.

Breastfeeding a preterm infant in the NICU – the unmet needs for parents

For parents of a preterm infant everyday life turns upside-down from one day to another with tremendous challenges and unexpected situations. During that burdensome circumstance families need much more than medical care and support – parents in particular require to be empowered and involved in their parental role from the beginning.

A growing number of studies show the benefit of family centered care and the importance of breastmilk for preterm infants. To provide breastmilk for her preterm born baby is one of the most important and emotional issues a mother can do. It has been shown that breastmilk can prevent necrotizing enterocolitis (NEC) and other health issues of a preterm baby and, can have an influence on the IQ as well as on the relationship between the mother and her child later in life. Breastmilk is the "golden drop", but to provide this high quality nutrition for those fragile babies hospitals not only need space and equipment – there also has to be available high quality nutrition for the mothers to provide this important "golden nutria". However in many children hospitals and especially in Neonatal Intensive Care Units (NICU) parents and other closed family members are still seen as visitors and not as parents of the tiny patient. Just a few NICUs provide space for parents to stay overnight or have a comfortable chair available to get rest, sleep or sit at the bedside of their baby. Most of the children hospitals offer no food for parents during their baby stays in the NICU. They spend often the whole day in the NICU – for weeks and months. An appropriate balanced diet for parents, especially for mothers, during the baby's time at the hospital would be the basic prerequisite for the healthy nutrition of a preterm baby. A lack of specialised health professionals regarding breastfeeding as well as adequate and understandable information to support mothers of preterm infants are often further challenges for many families, but also for the NICUs. Growing evidence for the benefit of breastmilk is founded and published in the meanwhile, but several unmet needs especially at the structural level have to be tackled in the future to ensure a healthy start in life for preterm infants.

The European Foundation for the Care of Newborn Infants (EFCNI) collaborates with scientific and health professional societies as well as parent organisations to improve preterm and newborn health in Europe in a sustainable way. Silke Mader and team members of EFCNI are involved in many research programmes and studies, having functions in the boards of different societies as patient representatives.

Symposium agenda 17th February 2017

Day 2: Friday

8:30 – 8:45	Introduction recap of day 1 and description of day 2
8:45 – 9:40	**Prof. Jane Scott** *The impact of digital technologies on breastfeeding*

Workshops: 2 hours 30 minutes

Group 1
Complicated births and breastfeeding

Prof. Guido Moro
Presence of a human milk bank is associated with an increased rate of breastfeeding in VLBW infants

Group 2
Educating and supporting mothers with breastfeeding

Dr. Hannakaisa Niela-Vilen
Supporting mothers to breastfeed their preterm infant

Group 3
Common challenges in breastfeeding practice

Ms. Becky White
Milk Man: a breastfeeding app for fathers.

Lunch: 1 hour

Speakers

13:30 – 14:30	**Prof. Mary Fewtrell** *The application of physiology for optimising collection and expression of breast milk*
14:30 – 15:15	**Dr. Husna Shukri** *The use of relaxation in breastfeeding*

Break: 30 minutes

15:45 – 16:30	Summary of workshops
16:30 – 17:00	Closing

Prof. Jane Scott

Curtin University

Jane Scott is a Professor of Public Health Nutrition at Curtin University in Perth, Australia. She has published extensively on the epidemiology of breastfeeding and infant feeding practices in both Australia and the UK. Her research has provided empirical evidence of the important role that partners play in a woman's decision to initiate and continue breastfeeding.

She is the principal investigator of a large randomised, controlled mHealth intervention involving 1400 expecting couples which is trialling Milk Man, Australia's first breastfeeding smartphone app designed specifically for fathers. She was a technical writer of the 2012 NHMRC Australian Infant Feeding Guidelines.

Impact of digital technologies on breastfeeding

Digital technologies provide health professionals with an unprecedented opportunity to engage with breastfeeding women far beyond the local geographical reach of the professional. Widespread access to, and use of, handheld digital devices make mobile phones a feasible, affordable and acceptable medium for delivering breastfeeding support. The digital divide that exists between low and high income countries will determine the way in which mobile phones are used, but broadly speaking they can be used to support breastfeeding mothers through direct messaging, voice counselling and interactive media (smartphone apps and social media).

The ready availability of smartphone apps and mushrooming use of social media present both opportunities and risks for breastfeeding protection and support. For instance, while a large number of smartphone apps exist, relatively few are 'support' apps, with the majority developed to 'track' breastfeeding. These apps are designed to meet the apparent need of mothers to know exactly how much breastmilk their infant is receiving and potentially may undermine a woman's confidence in her breastmilk supply. Similarly, millennial mothers are quick and eager to share their opinions with other mothers via social media which can result in the widespread and rapid proliferation of breastfeeding misinformation.

Mobile phones are being increasingly used in mobile health (mHealth) interventions targeting pregnant women but to date relatively few mHealth interventions have explicitly targeted breastfeeding and/or been robustly evaluated. This presentation will provide a rationale and identify opportunities for using digital technologies to support and promote breastfeeding; compare and contrast how mobile phones are being used in mHealth breastfeeding interventions in low and high income countries and; describe the best-practice development, testing and preliminary process evaluation of Milk Man, a breastfeeding support app designed specifically for fathers.

Prof. Guido Moro

Postgraduate School of Paediatrics,
University of Milan

Guido E. Moro, md, is professor of Neonatology at the Postgraduate School of Paediatrics, University of Milan, Italy; he has been the Director of the Centre for Infant Nutrition to Prevent Illnesses in Adult Life and Director of the Department of Neonatal Pathology of the Macedonio Melloni Maternity Hospital, the second largest in Milan, from January 2001 to December 2010.

His main field of research is infant nutrition, with particular interest to very low birth weight infants feeding, human milk, and human milk banks. He has published more than 250 scientific papers in international journals and presents regularly on the subject at international meetings.

In 1985 he founded the Human Milk Bank of Milan, the most technologically advanced human milk bank in Italy. This bank has collected more than 15,000 litres of human milk in the last 10 years.

At present time he is the President of the Italian Association of Donated Human Milk Banks, which coordinates the activity of the 33 existing banks in Italy.

From October 2010 to October 2012 he has been the first President of the European Milk Bank Association (EMBA). The main purposes of this association are to promote the donation of human milk, to increase the utilization of human milk in premature infants feeding, and to promote and support research to improve the knowledge and the quality of human milk.

He is also involved in social activities, and since 2004 he has been President of the Association “The Stair of the Life”, that utilizing a small theatre inside the hospital, organizes and promotes performances and activities for and with the hospitalized children.

In 2005 he received the “Gold Medal” from the City of Milan (the highest honour for people working in this city), due to his scientific activity and his interest and involvement in social field.

Presence of a human milk bank is associated with an increased rate of breastfeeding in VLBW infants

Human milk confers health benefits of vital importance for the sick and preterm infants in neonatal intensive care units (NICUs). Mother's own milk (MOM) is the first choice in preterm infant feeding, and every effort should be made to promote lactation. When mother's milk is not available or is insufficient, donor human milk (DHM) is recommended. Yet, occasionally, the concern that the use of DHM might decrease breastfeeding (BF) rate is being raised.

There are studies showing that DHM programs can strengthen current practices in NICUs to support BF by increasing the awareness of families and NICU staff of the value of BF for enhancing newborn health (1-4). For example, one study found that the exclusive BF rate for infants discharged from NICUs with an HMB (29.6%) was significantly higher than the rate for infants from NICUs without an HMB (16.0%) (4). In another study, infants discharged 2 years after the start of a NICU HMB program had sixfold higher odds of receiving MOM at discharge as well as a 49% reduction in the cessation of MOM consumption during hospitalization as compared to infants before the start of the program (1). In addition to the benefits of HMBs in increasing BF rates, the provision of DHM as a nutrition intervention has beneficial effects on neurodevelopmental outcomes, risk of sepsis, risk of necrotizing enterocolitis, tolerance of feedings, length of stay in the NICU and direct cost savings (5-8).

These confirmative data pointing at a positive impact of DHM use on breastfeeding rate suggest that human milk banking is not only about collecting, storing, processing, testing, and distributing human milk, but also about the extension of the culture of breastfeeding and the use of HM in NICUs, and may serve also as a tool for promotion of lactation. Besides, having access to DHM when MOM is insufficient may attenuate the possible feeling of guilt and inadequacy among mothers and might be encouraged.

The purpose of HM banking is to provide HM supply to preterm infants. When MOM is not available or is insufficient, donor milk is the best alternative and is associated with elevated rate of exclusive breastfeeding.

References

1. Parker MG, et al. J Hum Lact 2016; 32(2): 221-228
2. Vázquez-Román S, et al. An Pediatr 2014; 81 (3): 155-160
3. Bertino E. J Pediatr Gastroenterol Nutr 2015; 61: S12
4. Arslanoglu S, et al. J Perinat Med 2013; 41 (2): 129-131
5. Meinzen-Derr J, et al. J Perinatol 2009; 29 (1): 57-62
6. McGuire W, et al. Arch Dis Child Fetal Neonatal Ed 2003; 88 (1): F11-F14
7. Arslanoglu S, et al. J Pediatr Gastroenterol Nutr 2013; 57 (4): 535-542
8. Bertino E, et al. Early Hum Dev 2013; 89: S3-S6

Ms. Becky White

Curtin University

Becky White has a background in health promotion with an interest in mobile health technology. In 2012 she co-founded a company that develops health promotion apps, including the popular Feed Safe app for breastfeeding mothers. She is the developer of Milk Man, a breastfeeding app for fathers, and is currently completing a PhD in Public Health at Curtin University.

Milk Man: a breastfeeding app for fathers

The Australian first, Milk Man smartphone app is designed specifically for new and expecting fathers. It aims to start them thinking and talking about breastfeeding and fatherhood, and to provide them with the information and skills needed to support their breastfeeding partner. The app provides a community space for men to talk to each other, delivers infant age-specific information and includes a comprehensive, searchable library of evidence-based information with links to relevant and credible external websites (e.g. Australian Breastfeeding Association). Information is delivered in a quirky, fun format designed to appeal to men. The app uses strategies to engage fathers, including gamification, social connectivity and bi-weekly push notifications, and has been developed and tested with members of the target group and experts in the field. This short presentation will describe the development and testing of Milk Man and demonstrate the engagement features of the app.

Dr. Hannakaisa Niela-Vilén

Department of Nursing Science University of Turku

Hannakaisa Niela-Vilén, PhD, RM, is a Postdoctoral researcher in the Department of Nursing Science, University of Turku, Finland. She has been working at the Department for five years; first as a doctoral candidate and later as a researcher. Her main research interests are breastfeeding support, breastfeeding attitudes and early physical contact between a mother and her newborn infant. Her areas of expertise as a teacher of nursing science are qualitative research methods. Dr Niela-Vilén's four-year doctoral candidate position was funded by the Academy of Finland. Her PhD study was about breastfeeding preterm infants and early physical contact between mother and her preterm or sick infant. In addition, a social media –based intervention for breastfeeding mothers of preterm infants was developed. Before the academic career, Niela-Vilén has worked seven years as a midwife in the delivery ward.

Supporting mothers to breastfeed their preterm infant

Breastfeeding provides optimal nutrition for a preterm infant and a concrete way of being a mother to a vulnerable preterm infant. Breastfeeding even the smallest preterm infant is possible, but it demands persistence and hard work from the mother. Support and counselling from health care professionals are essential, but it seems that the quality of support and counselling is varying.

Although professional support is essential, peer support between mothers is an important source of emotional and informational support. Breastfeeding peer support has been traditionally conducted via face-to-face meetings to the mothers of full-term infants, but there is little evidence showing that peer support would be an effective method of promoting breastfeeding in preterm infants. Internet-based peer support is accessible despite geographical distance or time constraints but the evidence of its effectiveness is limited.

In the era of social media and digital technology, new and innovative methods for providing support for the breastfeeding mothers of preterm infants need to be developed and tested. A breastfeeding peer-support group utilising social media was developed for the mothers of preterm infants to support them in their challenges when breastfeeding. The mothers of preterm infants were able to discuss breastfeeding and were able to share their experiences and feelings with peer supporters and with each other. The new intervention showed no effect on the duration of breastfeeding the duration of breast milk expression or maternal breastfeeding attitudes. However, mothers enjoyed the experience and some of them felt they received support with their breastfeeding.

In future, more research needs to be conducted on support interventions in social media. In addition, digital health games have been successfully used in health promotion. The games seem to be effective in fostering knowledge, changing behaviour and attitudes. Some elements of gamification could also be utilised in breastfeeding support.

Prof. Mary Fewtrell

Childhood Nutrition Research Centre,
UCL GOS Institute of Child Health

Mary Fewtrell is Professor of Paediatric Nutrition and Honorary Consultant Paediatrician at UCL Great Ormond Street Institute of Child Health, London, UK. Following her training in Medicine and Paediatrics, she has worked in Infant & Child Nutrition research for 23 years. Her research interests include the programming of health outcomes by early nutrition and growth, investigated in randomised nutritional intervention trials in both term and preterm infants, with long-term follow-up; and practical aspects of infant nutrition, with studies on breastfeeding, breast milk expression and complementary feeding. She is the Clinical Lead for Nutrition at the Royal College of Paediatrics & Child Health, Chairs the Committee on Nutrition of the European Society of Paediatric Gastroenterology, Hepatology & Nutrition (ESPGHAN) and co-Chairs the Nutrition Group of the European Foundation for the Care of Newborn Infants (EFCNI), which is currently developing European Standards for nutrition in neonatal care.

The application of physiology for optimising collection and expression of breastmilk

Human milk is the optimum diet for all infants but may have particular benefits for high risk groups such as those born preterm. Since preterm and sick infants are often unable to breast-feed effectively, the provision of maternal breast milk relies on milk expression. Mothers who deliver a preterm infant may need to express milk for prolonged periods, and they require support and advice on how to maximise their milk production. Available evidence suggests that the most successful strategies result from the application of physiological principles derived from an understanding of the processes involved in normal lactation; including the mechanism by which infants obtain milk from the breast as well as hormones and psychological factors.

Successful strategies thus focus broadly on (1) hormones (prolactin, oxytocin, cortisol); (2) psychological factors such as counselling and relaxation therapies which may act via these hormones; and (3) physical factors which include how milk is expressed (frequency and style of expression including breast massage) and the design of breast pumps which more closely mimic how an infant breastfeeds, incorporating elements of compression as well as suction. Whilst these strategies have particular significance for mothers of preterm infants who may rely on milk expression for long periods, they can also be applied to mothers who wish to express milk for their term infant.

Dr. Nurul Husna M. Shukri

Faculty of Medicine and Health Sciences, University Putra

Nurul Husna is a senior lecturer at the Faculty of Medicine and Health Sciences, University Putra Malaysia. She received her PhD in infant nutrition from University College London Great Ormond Street Institute of Child Health, where her research project focused on mother-infant signalling during breastfeeding. She also has an MSc in Human Nutrition from Massey University, New Zealand where she was part of a research team investigating iodine status in pregnant and lactating women in New Zealand.

During her PhD, she conducted a randomised trial investigating the effectiveness of relaxation therapy in reducing maternal stress and the consequent effects on breast milk composition and infant outcomes. The project involved measuring macronutrient composition and bioactive components in breast milk and their relation with infant behaviour and growth. In addition to the clinical perspective, she also applied an evolutionary approach to infant feeding by studying the mechanism of the 'tug-of-war' between mother and infant, and maternal investment strategy during lactation. The ultimate aim of her project was to provide a greater understanding of maternal-infant factors which influence the success of breastfeeding.

Nurul Husna is also a qualified breastfeeding counsellor in Malaysia, where she has been actively supporting and helping mothers to breastfeed. This has allowed her to understand the relevance of the environment and cultural practices of mothers during the antenatal and postpartum period.

The use of relaxation in breastfeeding

Maternal psychological state is recognised to be influential for lactation success, largely by affecting milk ejection. Thus, increased stress and anxiety can disrupt milk flow and, in the long term, affect milk synthesis. Conversely, milk ejection could possibly be improved by using relaxation therapy during breastfeeding. However, a recent systematic review investigating the effectiveness of relaxation therapy for breast milk composition and volume, and infant behaviour and growth found a limited number of studies. Relaxation therapy was shown to increase milk volume in mothers of pre-term infants in two randomised trials, but neither investigated effects on infant outcomes, and no study has yet been performed in mothers of full-term infants. To address this research gap, a randomised controlled trial was conducted to test the effectiveness of relaxation therapy (guided imagery recording tape) on breastfeeding and infant outcomes in mothers of full-term infants. The study found that the intervention was effective in reducing maternal stress during lactation, favourably affecting breast milk composition (macronutrient and hormonal components) and positively influencing infant behaviour and growth. Given that relaxation tools such as the tape used in this study are generally simple to apply, these results suggest that further research is warranted to investigate potential applications of relaxation therapies for improving breastfeeding outcomes in different settings.

List of attendees

Matilda Aberg Wennerholm
Organization: Philips Avent
Country: Sweden

Mirna Al Sabbagh
Organization: MyPedia Clinic/Nutri Cycle
Country: United Arab Emirates

Rehan Ansari
Organization: Philips Avent
Country: United Kingdom

Naila Bahgat
Organization: Zero 2 five
Country: Egypt

Colin Binns
Organization: Curtin University
Country: Australia

Angela Brown
Organization:
Country: United Kingdom

Cristiane Maria da Conceicao
Organization: Hospital Israelita Albert Einstein
Country: Brazil

Mandy Daly
Organization: Irish Neonatal Health Alliance
Country: Ireland

Victoria Davies
Organization: Philips Avent
Country: The Netherlands

Maria Fernanda Dornaus
Organization: Hospital Israelita Albert Einstein
Country: Brazil

Anette Ekstrom
Organization: Högskolan i Skövde
Country: Sweden

Massimo Agosti
Organization: Del Ponte Hospital
Country: Italy

Claudiu Angelescu
Organization: Timisoara Hospital
Country: Romania

Sertac Arslanoglu
Organization: European Milk Bank Association
Country: Turkey

Amina Barkat
Organization: Iphabiotics
Country: Morocco

Lina Bollani
Organization: San Matteo Hospital
Country: Italy

Renan Olivera de Carvalho
Organization: Philips Avent
Country: Brazil

Yutao Cui
Organization: Cui Yutao Pediatrics Clinic
Country: China

Nika Daňková
Organization: Apolinar Hospital
Country: Czech Republic

Kevin van Dooren
Organization: Philips Avent
Country: The Netherlands

Ellen Eeman
Organization: Zorg in Nederland
Country: The Netherlands

Laila El Ammari
Organization: Iphabiotics
Country: Morocco

Nicholas Embleton
Organization: Newcastle Hospitals NHS
Country: United Kingdom

Mary Fewtrell
Organization: UCL Great Ormond Street Institute of Child Health
Country: United Kingdom

Arturo Giustardi
Organization: AICIP
Country: Italy

Berrada Ismail
Organization: Iphabiotics
Country: Morocco

Diana Jiang
Organization: Philips Avent
Country: China

Othmane Kabbaj
Organization: Iphabiotics
Country: Morocco

Malak Kadili
Organization: Iphabiotics
Country: Morocco

Mouna Khachani
Organization: Iphabiotics
Country: Morocco

Bettina Kraus
Organization: St. Joseph Krankenhaus
Country: Germany

Kim Loh
Organization: Nutrition Unit, GOSH-ICH, UCL
Country: United Kingdom

Silvia Magliulo
Organization: Philips Avent
Country: Italy

Iman Farzaneh
Organization: Philips Avent
Country: The Netherlands

Maylis Galeano
Organization: Philips Avent
Country: United Kingdom

Severin Harvey
Organization: Philips Avent
Country: The Netherlands

Leila Jader
Organization: Iphabiotics
Country: Morocco

Wibke Jonas
Organization: Karolinska Institute
Country: Sweden

Marta Kaczmarczyk
Organization: Philips Avent
Country: Czech Republic

Katherine Kennedy
Organization: Great Ormond Street Hospital Institute of Child Health, UCL
Country: United Kingdom

Kulnipa Kittisakmontri
Organization: Institute of Child Health, UCL
Country: United Kingdom

Zineb Cheikh Lahlou
Organization: Iphabiotics
Country: Morocco

Silke Mader
Organization: EFCNI
Country: Germany

Douglas McGeorge
Organization: Douglas McGeorge Ltd
Country: United Kingdom

List of attendees

Veronica Mircea
Organization: Philips Avent
Country: Romania

Guido Moro
Organization: AIBLUD
Country: Italy

Fabio Mosca
Organization: Mangiagalli Hospital
Country: Italy

Catriona Muir
Organization: IBCLC LCGB
Country: United Kingdom

Hannakaisa Niela-Vilen
Organization: University of Turku
Country: Finland

Petra Pařízková
Organization: Apolinar Hospital
Country: Czech Republic

Michael Power
Organization: Smithsonian Institution
Country: United States

Jane Scott
Organization: Curtin University
Country: Australia

Athul Singhal
Organization: Institute of Child Health, UCL
Country: United Kingdom

Hilary Sparkes
Organization: Hilary Sparkes Lactation Consultancy
Country: United Kingdom

Kamla Tawfik
Organization: Zero 2 five
Country: Egypt

Natalia Turano Monteiro
Organization: Hospital Israelita Albert Einstein
Country: Brazil

John Morris
Organization: Philips Avent
Country: United Kingdom

Andre Muegge
Organization: Philips Avent
Country: Germany

Mouad Nejjari
Organization: Iphabiotics
Country: Morocco

Olav Oftedal
Organization: Smithsonian Environmental Research Center
Country: United States

Ruth Phillips
Organization: Philips Avent
Country: United States

Louis Schuerman
Organization: Zorg in Nederland
Country: The Netherlands

Husna Shukri
Organization: Putra University
Country: Malaysia

Cvetka Skale
Organization: Javni zavod Splošna bolnišnica Celje
Country: Slovenia

Zuzanna Szupryczynska
Organization: Gabinet Lekarski
Country: Poland

Nicole Thiele
Organization: European foundation for the care of newborn infant
Country: Germany

Mireille Vanpee
Organization: Karolinska University Hospital
Country: Sweden

Elena Vasileva
Organization: Nadezhda hospital
Country: Bulgaria

Sashka Velcheva
Organization: Nadezhda hospital
Country: Bulgaria

Renata Vettorazzi
Organization: Zdravstvena fakulteta Ljubljana
Country: Slovenia

Huishan Wang
Organization: National Health and Family Planning Commission
Country: China

Lixin Wang
Organization: Global Care Women & Children's Hospital
Country: China

Manhua Wang
Organization: Shanghai redleaf international women's and children's hospital
Country: China

Zhixu Wang
Organization: China Nutrition Society
Country: China

Wilma van de Wassenberg
Organization: Philips Research
Country: The Netherlands

Zhuang Wei
Organization: Beijing Pediatric Hospital
Country: China

Becky White
Organization: Curtin University
Country: Australia

Sioned Wyn
Organization:
Country: United Kingdom

Jia Yidan
Organization: Philips Avent
Country: China

Jinyue Yu
Organization: Institute of Child Health, UCL
Country: United Kingdom

Yue Zhang
Organization: National center for Women and Children's health-China CDC
Country: China

Nadia Zinoun
Organization: Iphabiotics
Country: Morocco

Notes

Notes

www.philips.com