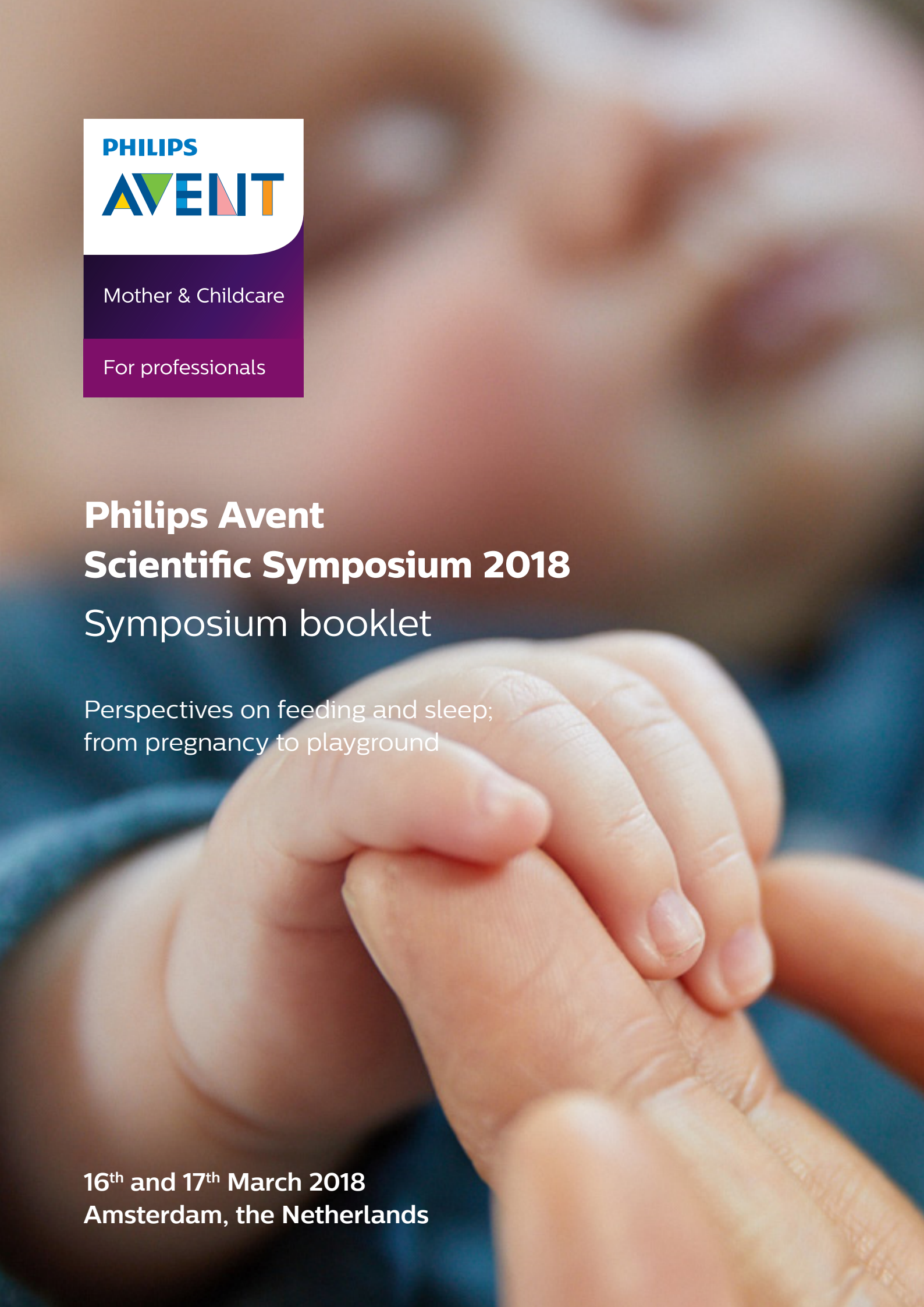

PHILIPS AVENT

Mother & Childcare

For professionals

Philips Avent Scientific Symposium 2018

Symposium booklet

Perspectives on feeding and sleep;
from pregnancy to playground

16th and 17th March 2018
Amsterdam, the Netherlands

Table of contents

Introduction

Dear Guest,
It is a great pleasure to welcome you in Amsterdam to our second Global Philips Avent Scientific Symposium. Over 100 participants from more than 15 countries have travelled to Amsterdam to share and discuss perspectives on feeding and sleep from pregnancy to playground, the first 1000 Days.

The first Global Philips Avent Scientific Symposium in London last year was a great success. Based on positive feedback from our participants around the globe, we are committed to continue our mission to provide a scientific platform to enable health care professionals to share the latest scientific insights and experiences around healthy breastfeeding, infant feeding and related practices.

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 latest research in the fields of breastfeeding, infant feeding and development, to healthcare professionals and parents, and to translating key concepts into innovative designed and evidence-based products and services.

At Philips Avent we are committed to supporting the best start in life for a healthy future. With healthcare evolving and patients taking more control over their own and their families care, we aim to support professionals and parents to enable the best care right from the start.

We do this not only through solutions and services, but through events such as this, bringing current scientific and parental perspectives on the most important aspects of maternal, infant and family care.

Over the next two days you will explore that latest scientific insights in infant feeding and sleeping practices and have the opportunity to discuss with key scientific leaders around the globe through interactive panel discussions on ‘‘Building Healthy Sleep routines” and the potential role of “Digital data in facilitating professional to parent care”.

Furthermore there will be a poster session where Health Care Professionals will share their latest scientific insights from daily practices around the globe, a nice opportunity to actively engage with your peers during the symposium.

In this booklet you will find detailed information about the program such as: agenda, accommodation and the city of Amsterdam. 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 driving latest perspectives on feeding and sleep from pregnancy to playground.

Please enjoy the symposium.

Kind regards,

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

Symposium agenda 16th and 17th March 2018

Day 1: Friday 16th of March	
11:00 – 13:00	Registration and lunch reception
13:00 – 13:15	**Dr. Victoria Davies and Chair Prof. Atul Singhal** *Opening ceremony*
13:15 – 13:45	**Prof. Atul Singhal** *Developmental origins of health and disease; where are we now*
13:45 – 14:30	**Dr. Erin Leichman** *General aspects of sleep for mother and infant*
Break: 30 minutes	
15:00 – 15:45	**Dr. Desaline Joseph** *Infant sleep and infant feeding - the key is in the circadian clock*
15:45 – 16:30	**Prof. Dieter Wolke** *Early crying and sleeping of infants and their consequences*
16:30 – 18:00	**Panel discussion** *Building healthy sleep routines*
Break: 1 hour	
19:00 – 19:30	Drinks in the Chapel of Hotel Arena
19:30 – 22:00	Dinner in the Chapel of Hotel Arena

Day 2: Saturday 17th of March	
8:30 – 8:45	Opening session including recap of day 1
8:45 – 9:15	**Prof. Jaap Seidell** *Lifelong impact of nutrition in the first thousand days after conception*
9:15 – 10:00	**Dr. Valerie Flaherman** *The impact of breast milk expression on maternal experience*
Break: 30 minutes	
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Break: 30 minutes	
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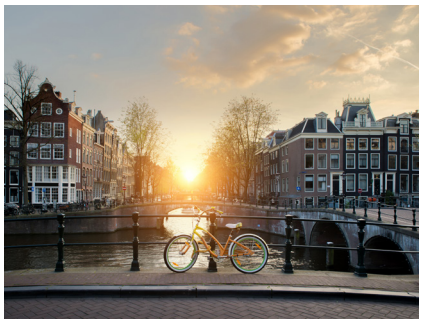
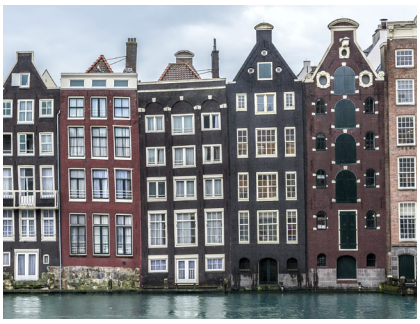
16:20 – 16:45	**Ms. Nika Daňková, BSc.** *Increasing breastfeeding rates through education*
16:45 – 17:15	*Poster winner and closing*

Welcome to Amsterdam

Amsterdam is home for little over 800,000 residents from more than 180 countries and it has become one of the most multicultural city in the world

From its humble beginnings as a 13th-century fishing village on a river bed to its current role as a major hub for business, tourism and culture, Amsterdam has had a strong tradition as a centre of culture and trade.

Amsterdam, has stately 17th-century houses and is a compact capital with more bikes than people, more nationalities than New York, more canals than Venice and more world-class museums than pretty much anywhere. You will enjoy the diversity and rich Dutch culture.


Hotel Location & information

Set in The Cultural Garden of Amsterdam, Hotel Arena is located in the East district, one of the trendiest neighborhoods of Amsterdam. The city center is only five minutes away.

The Tropenmuseum and ARTIS-Amsterdam Royal Zoo are minutes away. And many museums, like the famous Rijks Museum, with a rich collection of Dutch art and history, can be reached in a few minutes via public transport or by bike.

The elegant renovated hotel is located in a monumental building dating from 1886. The building once functioned as a home for Roman Catholic orphan girls. You can still find an original, restored chapel, complete with stained glass windows from that time. Service is friendly, and you're equally well placed here for the Scientific Symposium at The Royal Tropical Institute.

Hotel Arena
's-Gravesandestraat 55, 1092 AA Amsterdam

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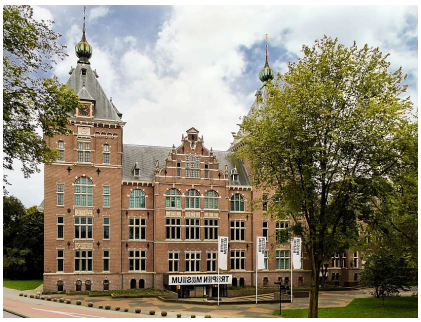
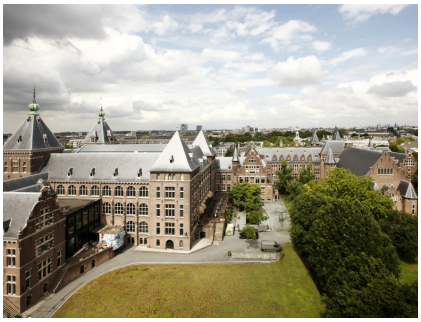
Venue

The venue location, KIT Royal Tropical Institute, is an independent centre of expertise, education, intercultural cooperation and hospitality dedicated to sustainable development.

KIT follows the UN's Sustainable Development Goals (SDG's), as a general framework for action, to translate practice into global Knowledge and bring global knowledge to inform best practices.

Based on a national heritage site in Amsterdam, KIT focuses on key areas where it can make a difference: healthcare, gender and agriculture





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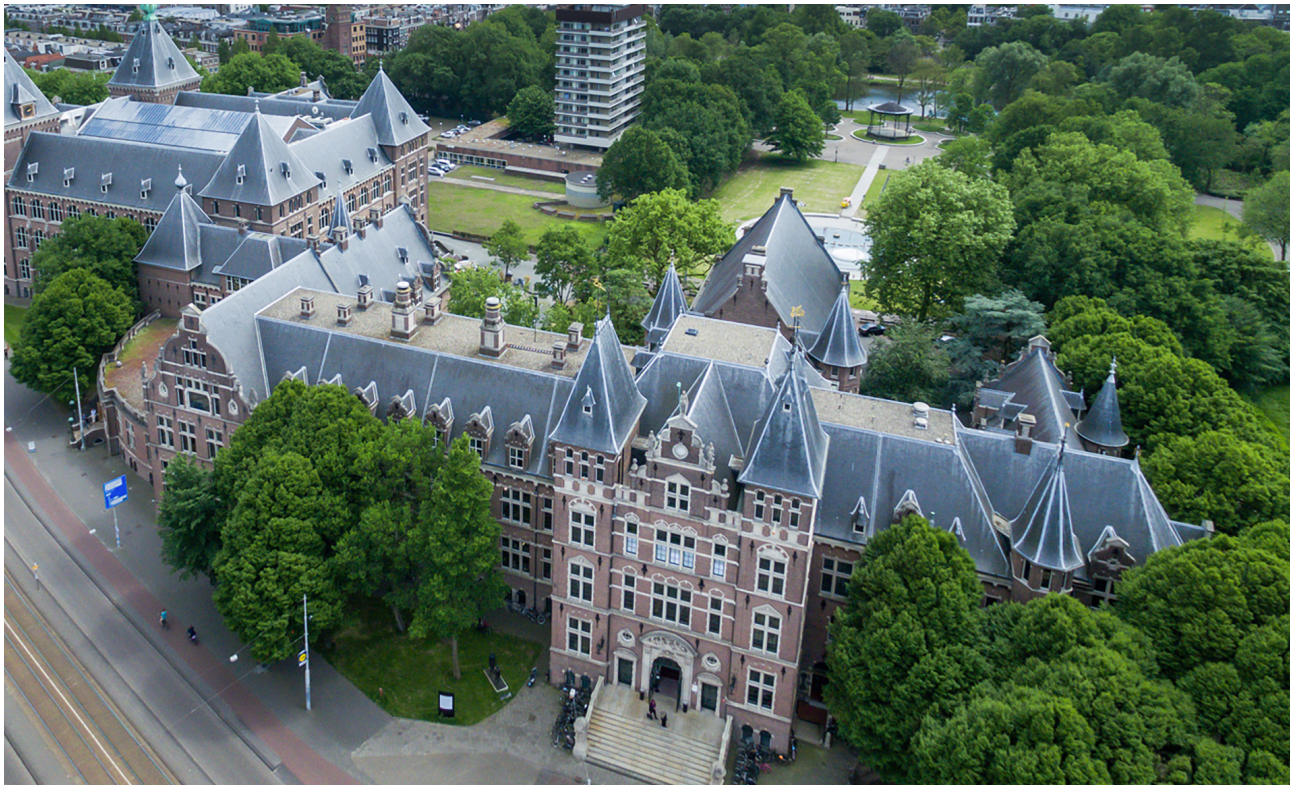

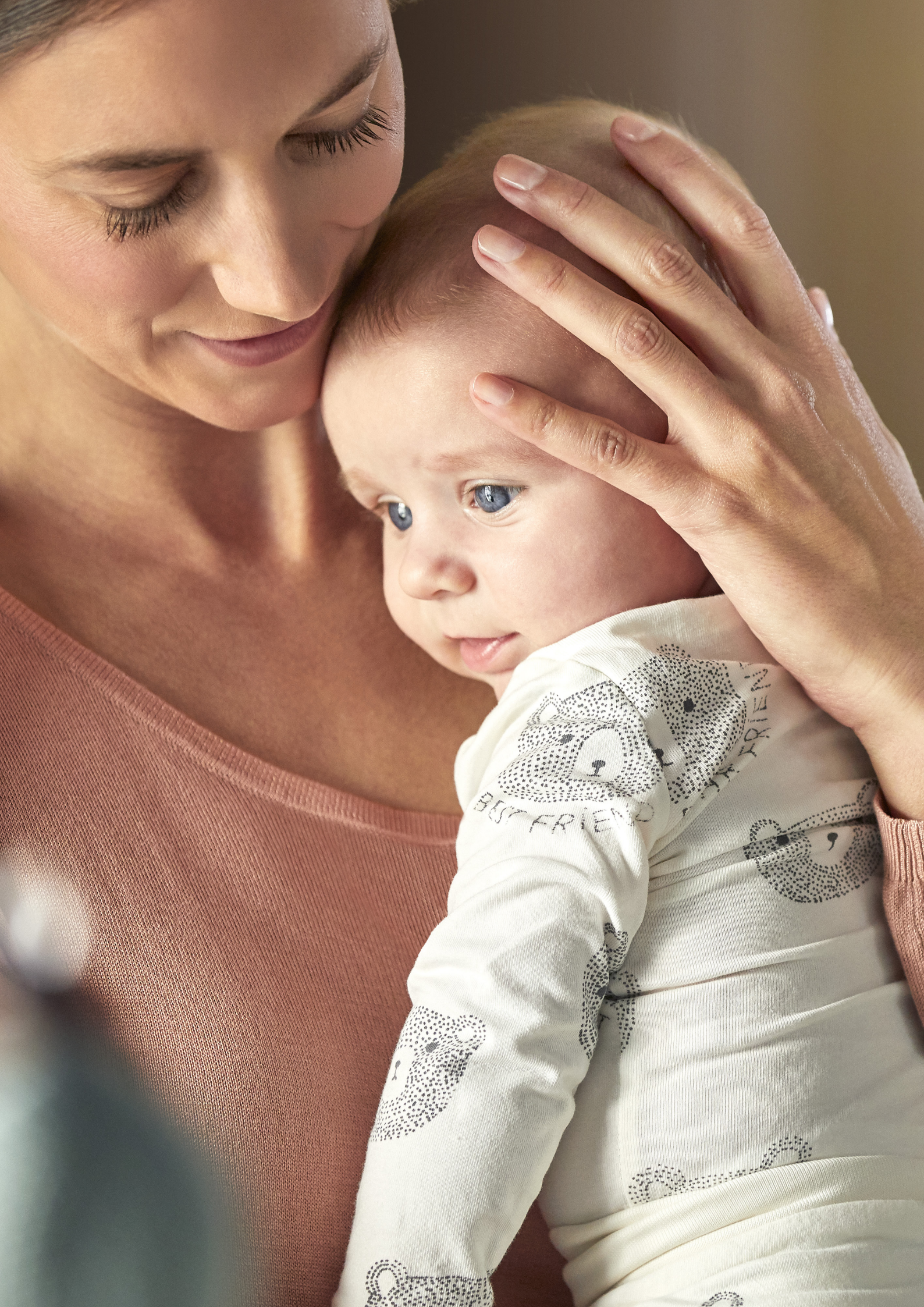

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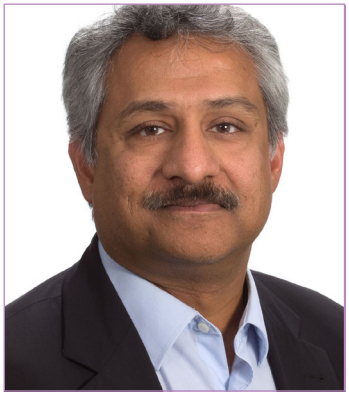

Prof. Atul Singhal

University College London, Institute of Child Health, UK

Atul Singhal is Great Ormond Street Hospital Children's Charity Professor of Paediatric Nutrition at 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.

Developmental origins of health and disease; where are we now

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 has been shown to impact on long-term health, a hypothesis known as the developmental origins of health and disease[3].

Some of the earliest evidence for nutritional programming in humans was obtained from observational studies from the late 1980's linking low birth weight with adult cardiovascular disease[4]. Now, both under and over-nutrition during pregnancy has been associated with adverse outcomes in the offspring such as neuro-cognitive impairment, obesity and an increased risk of cardiovascular disease[4]. Importantly, recent experimental (randomised) evidence supports a causal link between over-nutrition during pregnancy and an increased risk of obesity in the offspring[5].

Postnatally, 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[6,7], atopic disease[8], bone health[9], and risk of obesity and cardiovascular disease[10,11]. 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[12], data from a cluster randomised trial[13], as well as evidence of benefits of breast-feeding on visual development[13] and structure of the brain[14,15].

The mechanisms underlying the cognitive benefits of breast feeding are uncertain, but previous studies have investigated differences between human milk and formula in concentrations of biologically active factors such as nucleotides, lipids, and the milk fat globular membrane. More recent research focuses on the impact of breast milk nutrients (e.g. tryptophan, nucleotides and long-chain fatty acids) on sleep modulation and early brain development in infancy[16].

This presentation will give an update on the development origins of health and disease[11] including an overview of the role of human milk intake on long-term cognitive function and the possible mechanisms involved. It will highlight the key role of promoting exclusive breast-feeding[13], the potential impact of specific breast milk nutrients, 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.

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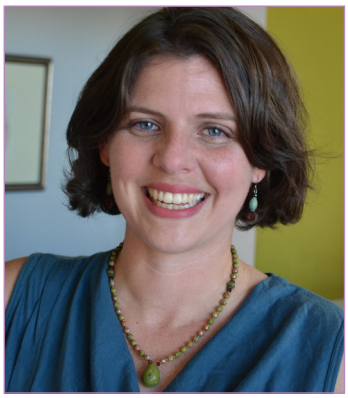


Dr. Erin Leichman

Saint Joseph's University, USA

Erin Leichman, Ph.D., NCSP is a is a senior research psychologist at Saint Joseph's University in Philadelphia, PA, and the Executive Director of the Pediatric Sleep Council. She serves as the primary editor of BabySleep.com, a website dedicated to providing publicly-available information on sleep in infants and toddlers. Dr. Leichman's research focuses on pediatric sleep in young children and their families, publishing in such journals as Sleep Medicine, Journal of Sleep Research, and Journal of Clinical Child and Adolescent Psychology. Dr. Leichman is a licensed psychologist and Nationally Certified School Psychologist with specialized training in behavioral sleep medicine. Dr. Leichman received her doctorate from Lehigh University, completing her internship at Louisiana State University Health Sciences Center and postdoctoral clinical training at The Kennedy Krieger Institute at The Johns Hopkins University School of Medicine. She also trained at the Sleep Center at the Children's Hospital of Philadelphia.

General aspects of sleep for mother and infant

Sleep is a critical component of development in young children. It is also essential for maternal health and well-being.

From early infancy through toddlerhood, sleep patterns change significantly.

These changes affect not only the infants themselves but also their mothers and families.

This presentation will outline the timeline of changes in maternal and child sleep patterns throughout early childhood. Common parental concerns related to infant sleep will also be discussed.

Dr. Desaline Joseph

Evelina London Children's Hospital, St Thomas' Hospital, UK

Dr. Desaline Joseph is a Consultant in Paediatric Sleep Medicine and Neurodisability at Evelina London Children's Hospital, St Thomas' Hospital. She qualified in Medicine in 2000 from University of Leicester UK. She has a Doctorate in Medicine and has conducted research in circadian rhythm development in newborn infants. Her research has included home based physiological measurements in infants including estimation of melatonin, cortisol and clock genes. Mothers acted as main research assistants in the studies. Dr. Joseph held a National Institute of Health Research (NIHR), one of the UK's primary research grant funder, Academic Clinical Lecturer post at the University of Nottingham. She has experience in recruitment to national studies/ trials and has authored research publications and conducted collaborative projects.

Dr. Joseph is a past recipient of the Early Stage Researcher Award by the British Sleep Society.

She is a member of the American Academy of Sleep Medicine, the Royal College of Paediatrics and Child health and in actively involved in undergraduate and postgraduate education.

She comes from a paediatric neurodisability background and is passionate about developing the field of paediatric sleep medicine within the UK. She is passionate about multidisciplinary working and feels parent/family engagement are key to infant, child and adolescent wellbeing in terms of sleep and general health outcomes in the paediatric population.

Infant sleep and infant feeding – the key is in the circadian clock

24 hour (circadian) bio rhythms are essential for life. The rhythms in newborn infants are not intact at birth.

They develop over the first few months of life, rendering a time critical window for development.

A delay in physiological maturation renders the infant vulnerable and at risk from harm due to specific morbidity and mortality.

The natural rhythms originate from an endogenous circadian clock (supra chiasmatic nucleus or SCN). The SCN's function is to synchronise and coordinate key biological functions such as sleep-wake cycles, physiological parameters, regulate hormone production with the daily the external environment and assemble peripheral clock genes.

Infant sleep patterns and feeding are crucially linked. Feeding timing, regularity and feeding type all act as entrainers of the clock as well as having an influence on infant's physiological state.

Modifications in infant care have a role in accelerating or delaying physiological maturity.

A fuller understanding of the ontogeny of circadian rhythms in newborns is essential for infant health and wellbeing.

Prof. Dieter Wolke

University of Warwick, Department of Psychology and Warwick Medical School, UK

Dieter studied at the University of Kiel (Germany) and University of London and obtained his PhD from the University of London, Faculty of Science. He has worked at different colleges of the University of London (Institute of Education; King's College; Institute of Child Health) and the Universities of Munich, Hertfordshire and Bristol. Before his appointment at the University of Warwick, he worked in the research funding sector (Scientific Director of the Jacobs Foundation, Zurich, 2004-2006) while holding Visiting Professorships at the University of Bristol and University of Zurich.

Much of his research is interdisciplinary (psychology, social and medical sciences), longitudinal and in the field of Developmental Psychopathology. His major research topics are: 1. early regulatory problems (crying, sleeping and feeding) in infancy and their long term consequences; 2. how preterm birth affects brain development and psychological development and quality of life; and 3. Peer or sibling victimization (bullying): precursors, consequences and interventions. He is involved as PI/Co-PI in a range of follow-up studies in the UK and Germany including the ALSPAC cohort, EPICure Study and the Bavarian Longitudinal Study. He is joint manager of the Horizon 2020 RECAP project involving 12 countries trying to improve the lives of preterm children. He works with several charities and has been involved in a number of intervention studies ranging from how neonatal discharge can be improved (e.g. midwife training), how to deal with excessive crying and infant regulatory problems or virtual intervention to deal with bullying victimization. He is currently collaborating in a trial of managed transition from adolescent psychiatric services into adult psychiatric services (EU wide project: Milestones). He received an honorary doctorate (Dr rer nat h.c.) from the Ruhr University Bochum, Germany, in 2014 for his contribution to Psychological Science.

Early crying and sleeping of infants and their consequences

All babies cry and all have to learn to sleep through the night and go through a bio-behavioural adaptation.

However, if the attempts at adaptation fail beyond the normative period (e.g. “colic” crying continues beyond 3 months of age), this indicates early regulatory problems, i.e. the inability to stop an ongoing behavior such as crying or waking at night.

Four to 10% of infants experience more than one regulatory problem at the same time, i.e. multiple regulatory problems (MRP).

Regulatory problems are highly challenging for parents and these parents are more likely to ask for professional help. I review our and others research that MRP infants are at increased risk for continued behaviour dysregulation and mental health problems in childhood, adolescence and even adulthood. Implications for clinical practice are discussed.

Panel discussion

Nina Warburton (Chair)

Design Lead
Philips Mother and Childcare

Amsterdam

Dr. Erin Leichman

Senior research psychologist at Saint Joseph's University in Philadelphia, PA
Executive Director of the Pediatric Sleep Council.

She serves as the primary editor of BabySleep.com

Prof. Dieter Wolke
Professor at the University of Warwick
Lead of the Lifespan Health and Wellbeing

Research Stream within the Department of Psychology and part of the Division of Mental Health and Wellbeing, Warwick Medical School

Dr. Desaline Joseph

Consultant in Paediatric Sleep
Medicine and Neurodisability

Vero Baez

Amsterdam based Mom of twins &
Creative editor at Stylemindt Bolg

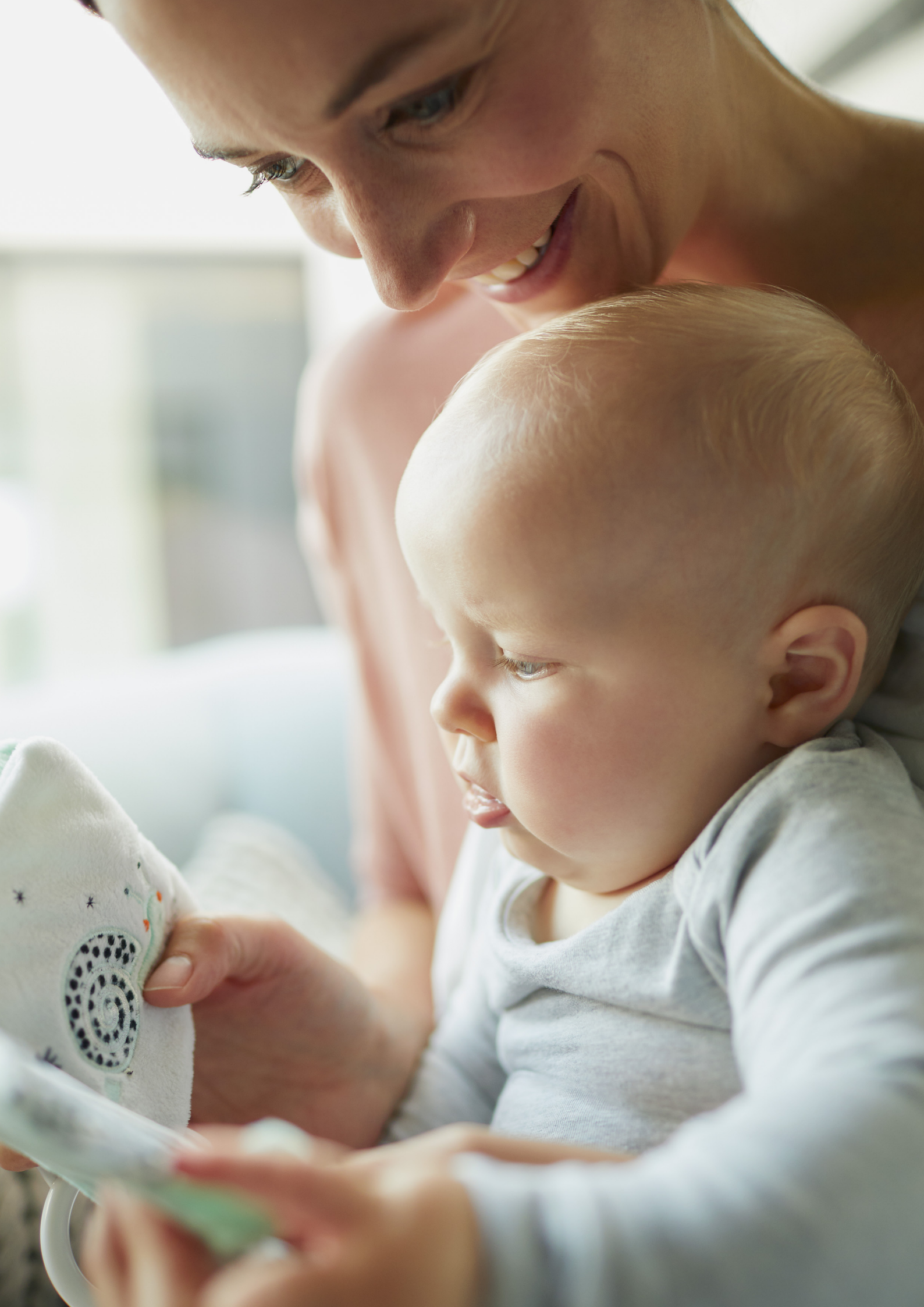
Building healthy sleeping routines

In the scientific world, sleep is being recognized for it's role in the cognitive and behavioral development and emotional well-being of infants and the potential impact on later life outcomes.

In daily practice, in dialogue with new parents, sleep is one of the most frequent discussed topics, as it is one of the biggest concerns for parents. Supporting them in building healthy feeding and sleeping routines is key.

During this panel discussion we will explore the importance of sleep, the potential correlation between feeding and sleeping patterns and the possible impact on infants later life outcomes.

Through an interactive discussion with experts, we will explore the latest scientific insights and practices from the field that could provide support in empowering parents facing infant feeding and sleeping difficulties.



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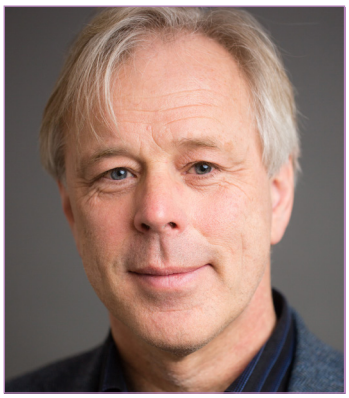


Prof. Jaap Seidell

Vrije Universiteit Amsterdam

Prof. Jacob C. Seidell was appointed as full professor (2002-present) and head of the Institute for Health Sciences (2003-2013) at the VU University in Amsterdam. Since 2013 he is appointed as one of the two distinguished 'university professors' at the VU University and co-director of Sarphati Amsterdam, a multidisciplinary research institute that focuses on healthy development of children through healthier lifestyles and environments.

He obtained his MSc (1983) and PhD (1986) at the Department of Human Nutrition at the University of Wageningen, the Netherlands. He was awarded a senior research fellowship by the Royal Academy of Arts and Sciences (KNAW) for the period 1988-1992. In this period he worked as a postdoc at Sahlgren's Hospital, Göteborg, Sweden and the National Institute on Aging in Baltimore, US. From 1992-2002 he was head of the Department for Chronic Diseases Epidemiology at the National Institute for Public Health and the Environment in Bilthoven, The Netherlands

His research focuses on the understanding of determinants of food choice and the effectiveness of (policy) interventions in the context of the prevention and management of non-communicable diseases in general and of obesity in particular.

He (co)-authored well over 500 scientific papers and chapters in books on these topics but he also writes columns for leading national newspapers and, together with psychologist Jutka Halberstadt, published three popular books on obesity (2011) and nutrition (2014, 2018) for the general public.

He chaired numerous committees which produced dietary guidelines for the general population as well as for people with diabetes or obesity and he is a frequent consultant to the World Health Organization on these matters.

He has served as president-elect and as president (1992-2000) of the European Association for the Study of Obesity and was editor-in-chief of the "European Journal of Clinical Nutrition" (1996-2006) and "Public Health Nutrition" (2006-2014). He is a member of the Royal Academy of Arts and Sciences (KNAW).

Lifelong impact of nutrition in the first thousand days after conception

Chronic noncommunicable diseases such as type 2 diabetes, cardiovascular disease and obesity, are reaching epidemic proportions worldwide. These are accompanied by severe impairment of quality of life and huge cost of medical care. Particularly those with a relatively low socio-economic position are at increased risk for these chronic diseases. In addition to treatment, adequate prevention targeted at high risk groups and high risk individuals is a necessity.

Prevention deals with behavioral and environmental determinants of these diseases. Smoking, excessive use of alcohol, lack of physical activity and unhealthy diets are particularly harmful behaviors that are largely blamed for these global epidemics. These in turn are heavily influenced by physical, economic and socio-cultural environments that are related to increased urbanization and globalization of markets. The World Health Organisation has estimated that about 80 percent of these chronic noncommunicable diseases can be prevented by healthier lifestyles.

The World Health Organization also stresses the importance of a lifecourse approach to address the prevention of these diseases. The life course starts at conception. Especially the first thousand days, from conception until the second birthday, are considered to have a crucial and potentially lifelong effect on the growth and development of children.It is increasingly recognized that nutrition already affects the health of the child before conception by influencing the intra-uterine growth and development. For instance, the degree of overweight of the mother and father at conception predict to some extent the likelihood of overweight in their future offspring. This partly reflects genetic susceptibility that is transferred from the parents but studies have shown that weight loss of mothers with obesity before pregnancy also lowers the risk of overweight in their children. The intra-uterine environment of children of mothers with obesity (commonly accompanied by insulin resistance) may affect the metabolic programming in the fetus. Examples of metabolic programming in the fetus are insulin resistance in the fetus, low muscle mass and reduced metabolic rate all of which can predispose the child to future risk of obesity and type 2 diabetes.Some of the effects of intra-uterine nutrition are mediated by epigenetic effects of nutrients. Epigenetics describes the cellular processes that determine whether a certain gene will be transcribed and translated into its corresponding protein. It is a specific kind of metabolic programming. This occurs through DNA methylaation. Food containing nutrients that can act as methyl donors such as folic acid and choline may be of particular interest in this regard. These epigenetic changes may have lifelong effects and even may have transgenerational consequences. This means that, for instance, effects of malnutrition during pregnancy not only affects the health of the offspring but also of the grandchildren. An example of epigenetic changes resulting from exposure to malnutrition were recently demonstrated in the Dutch Hungerwinter project. More than 70 years after the second world war children of mothers who were exposed to famine during the final stages of the German occupation still showed epigenetic changes in a number of genes relating to energy metabolism and glucose regulation. Further research is needed in this fascinating area.

In addition to a high weight of the mother at conception, excessive weight gain of the mother during pregnancy also has adverse effects. It increases the risk of gestational diabetes and hypertension in the mother which may lead to obstetric complications and further exacerbate the future health risks of chronic diseases in the child. On the other hand, lack of nutrients during pregnancy, due to malnutrition of the mother, may lead to intra-uterine growth retardation that may impair organ development with a lasting effect on the metabolism of the child. The changed metabolism in turn, may predispose toward future increased risk for type 2 diabetes and cardiovascular diseases.

After birth, nutrition continues to be important for the mental, physical and social growth and development of the child. Exclusive breastfeeding for at least 4-6 months is considered to provide optimal nutrition and partial breastfeeding is to be encouraged up to one or two years of life. The quality of weaning foods after six months should secure optimal nutrition. This not only relates to optimal supply of nutrients such as essential fatty acids, and adequate intakes of proteins, vitamins and minerals but also to the avoidance of foods rich in free sugars. Particularly sugary drinks seem to contribute to excessive consumption of calories mainly because they are not affecting appetite regulation effectively. Development of taste preferences and lasting attitudes towards certain foods is at a crucial stage in this period. In addition also the texture of foods are important. Learning to chew and swallow fibre rich and hard foods also occurs in this phase. Excessive weight gain of the child in the first year of life may indicate an increased risk of later overweight or obesity. Routine monitoring on linear growth and weight is important to identify high risk patterns of growth and may prompt early interventions to prevent weight problems later. Not only dietary habits are important. Lack of physical activity, chronic sleep deprivation and frequent use of antibiotics may contribute to the risk of obesity.The effect of antibiotics point towards a potential important role of the gut microbiome. The composition of the microbiome is largely determined by nutrition. Fibre rich products are considered to have beneficial effects on the diversity of bacteria in the intestine. Pre- and pro-biotics may turn out to have a positive effect on growth and development of children. This area of research is quickly developing and may lead to effective preventative interventions of chronic diseases in the future.

Joint efforts for a healthy start

Although many details of the underlying mechanisms have still to be unravelled it is already clear that nutrition in the first thousand days is of prime importance for the future health and wellbeing of the child. Assuring optimal nutrition during this critical phase of life should be a priority in public health policy and in the practices of midwifery and youth health care. So that parents are facilitated as much as possible in giving their children a healthy start in life.

Dr. Valerie Flaherman

University of California, San Francisco, USA

Valerie Flaherman, MD, MPH, is Associate Professor of Pediatrics and Epidemiology and Biostatistics at the University of California San Francisco. Board certified in Pediatrics and Preventive Medicine and as an Internationally Board Certified Lactation Consultant, she is Director of the Newborn Nursery at UCSF Benioff Children's Hospital and provides general pediatric care and lactation support.

Dr. Flaherman's clinical research program has focused on improving breastfeeding duration for mother-infant dyads who initiate breastfeeding, with specific attention to those facing initial barriers to breastfeeding such as poor infant latch or suck or delayed onset of maternal milk production.

The impact of breast milk expression on maternal experience

Breast milk expression is common among breastfeeding mothers, especially in the first few months after birth.

Milk expression can be practiced either using a breast pump or by hand, and may be practiced by a mother for a variety of indications: to increase her milk production, to feed the infant herself without direct breastfeeding, or allow others to feed the infant when she and the infant are separated by work, school, illness or other factors.

The method of milk expression and the indication for expressing may have a substantial impact on a mother's overall breastfeeding experience, which in turn may have an important effect on breastfeeding duration. This presentation will explore the evidence base describing the impact of milk expression on maternal experience during breastfeeding, and will review the scientific literature on the relationship between maternal milk experience and overall breastfeeding duration.

New findings regarding both positive and negative impacts of milk expression on breastfeeding duration highlight the need for additional research to assess maternal experience of milk expression using tools such as the Breast Milk Expression Experience (BMEE) measure.

By tailoring milk expression techniques to optimize maternal experience, it may be possible to allow more mothers to achieve their own individual breastfeeding goals and potentially reduce racial, ethnic and geographic disparities in breast milk provision, thereby improving the health and development of infant populations worldwide.

Ms. Marloes Lagarde, MSc.

Radboud University Medical Center, the Netherlands

Marloes Lagarde, MSc. is speech language therapist and PhD student in the Radboud university medical center in Nijmegen, the Netherlands.

Her clinical work is related to infants and children with a wide range of feeding and swallowing problems. Her PhD project is about the added value of instrumental measurements in the diagnosis of pediatric dysphagia.

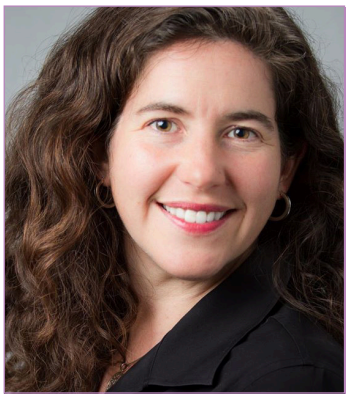
Aspects of neonatal feeding

Adequate nutritional intake in neonates is essential for proper growth and development. Infants receive their nutrition by nutritive sucking during breastfeeding or bottle feeding.

Normal neonatal nutritive sucking is a complex activity consisting of well-coordinated sucking, swallowing and breathing.

The development of nutritive sucking starts in the prenatal period.

With the influence of feeding reflexes, infants are capable of nutritive sucking and swallowing during the first months of their life. After the age of 2-3 months feeding reflexes disappear. Important aspects of nutritive sucking during the first months of life will be discussed in detail during this presentation; the changing anatomy, the suck-swallow-breath ratio, the coordination of inhalation and exhalation with swallowing, the movement of the tongue and the influences of different teats on these aspects.



Dr. Catherine Forestell

The College of William & Mary in Williamsburg, Virginia, USA

Professor Catherine Forestell is an Associate Professor in the Department of Psychological Sciences at William & Mary in Virginia, USA. She received her PhD in Experimental Psychology from Dalhousie University in Nova Scotia, Canada where she conducted research on learning and memory processes in rats.

Upon completion of her dissertation she worked as a postdoctoral fellow and research associate at the Monell Chemical Senses Center in Philadelphia. Since her arrival at William & Mary in 2007, she has taught courses in developmental and health Psychology and Research Methods. She also conducts research that focuses on understanding how early experiences play a role in the development of flavor and food preferences and addictive behaviors in children and adults.

Her research has been funded by the Canadian Institute of Health Research and the National Institutes of Health.

Early flavor experiences and their adaptive role during weaning and beyond

Over the past 30 years, we have gained important insights into the unique flavor world in which children live and the chemosensory factors involved in their acceptance and rejection of foods.

Behavioral studies using a variety of techniques have demonstrated that infants begin learning about the flavors of foods within their culture before birth.

By the last trimester, the taste and olfactory receptors are capable of detecting the continually changing flavor profile of the amniotic fluid, which reflects the mother's cuisine. Because breastmilk also contains volatiles from the maternal diet, these favor experiences continue after birth if mothers choose to breastfeed. In contrast to breastfed children, those who are formula fed are exposed to a monotonous flavor-profile and may be less accepting of flavors and foods that differ from the flavor profile of their formula at weaning.

These early exposures, one of the first ways children learn about flavors, "fine-tune" their innate sensory responses and contribute to individual differences in food acceptance. At weaning children continue to learn from varied chemosensory experiences.

Those who are repeatedly exposed to a wide array of healthful foods learn to like these foods and are more accepting of novel foods.

Whereas those who are routinely fed sweet- and salty-tasting foods learn to prefer these foods. In combination, these findings suggest that mothers who consume an array of healthy foods throughout pregnancy and lactation, and feed their children these foods at weaning will promote healthful eating habits in their children that will lead to long term health benefits.

Panel discussion

Dr. Victoria Davies (Chair)

Director Medical and Clinical Programs
Philips Mother and Childcare

Philips Avent, Amsterdam

Vicki Scott

Baby Feeding and Wellbeing Advisor
Philips Avent
Midwife, UK

Karine van 't Land
Physician preventive child care
JGZ ZuidZorg (NL)

Dulcie Madden

CEO Rest Devices
From baby sleep tracker Apps Nod and Mimo

The role of digital data in facilitating professional to parent care

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 hea lthcare systems.

During this panel discussion we will explore the role of digital technologies and data, and how this may facilitate care between professionals and parents, with focus on establishing healthy feeding and sleeping routines. Through an interactive discussion with the experts, we will explore the latest thoughts and experiences from the field.

Drs. Silvia Caruso

University of L'Aquila, Italy

Silvia Caruso graduated on the 24th of July, 2012 in Dentistry with "110/110 cum laude" from the University of L'Aquila

She graduated on the 14th of April, 2016 with a post-graduate degree in Orthodontics, with "50/50 cum laude".

In 2013, she completed her Masters in Paediatric Dentistry and Interceptive Orthodontics, at the University of Pisa. In 2015, she completed "Training Post-Graduate Course" in Orthodontics: "Guidelines to Orthodontics from scientific evidence to clinical reality", at the Unversity of Pisa.

She is currently study for her PhD in Paediatric Dentistry at the University of L'Aquila. She is an active member of Italian society of Paediatric Dentistry (SIOI), European Organization of Paediatric Dentistry. She is now managing research projects in Paediatric Dentistry and, in particular, in non nutritive suction.

Non-nutritive sucking and importance of pacifier use in the first year of life: a retrospective study

AIM: the aim of this study is to evaluate the effect of the use of several commercial pacifiers, selected among many of the product parents usually choose for their children, and their eventual relation with malocclusion as a non-nutritive sucking habit.

MATERIAL AND METHODS: a retrospective study has been conducted on a population of 200 children, aged 2-5 years old, recruited at the dental clinic at the University of l'Aquila. A questionnaire was handed to the parents of the children, in order to evaluate age, history of the patient, presence of primary teeth, oral habits, and breastfeeding. After the end of the study, a second questionnaire was filled in by parents of patients, in order to evaluate the use of pacifiers, after been regularly used by children. Dental visits were done after 1,3, and 6 months from the first use.

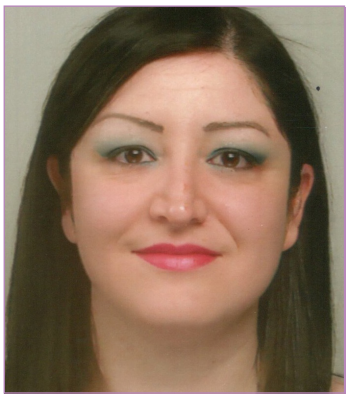
RESULTS AND CONCLUSION: Malocclusion is a deviation of growth and development and involves muscular and skeletal structures during childhood and adolescence and development in early childhood is related.

Malocclusion represents an increasing trend and can be multifactorial: there is an interaction between genetic and environmental factors. It is the most frequent defect in the development of craniofacial structures, affecting about 65% of the American population.

The results of the study show that only 7% of the studied population (14 children/200) had an abnormal development of bone basis, 1% (1 child/200) could not continue the study due to personal problem, 92,5% (185 children/200) did not show any kind of bone alteration.

Even if non-nutritional sucking inevitably leads to the movement of perioral and lingual muscles, thus affecting the shape and growth of the dental arches, this study shows how Philips Avent pacifier does not interfere with the normal development of bone basis, since 7% is extremely lower than the 65% of subjects affected by malocclusion. Due to its shape, dimension and material, Philips Avent pacifiers resulted to be better than the other commercial ones.

Further studies needed to confirm the results of this study.



Ms. Elmira Boloori, MSc.

Academic Center for Dentistry Amsterdam, the Netherlands

Elmira Boloori graduated first as a dental hygienist at 'Hoge school van Utrecht'.

There after she achieved her masters in dentistry at Academic Center for Dentistry (ACTA) in 2013. In 2017 she graduated cum laude for specialization in periodontology and implant dentistry at ACTA.

Currently she is working in her own periodontology and implantology clinic in Rotterdam. Furthermore she is working on her PhD at the departments periodontology and dental material sciences at ACTA, with the title "Resin composites and their effect on gingival epithelial cells".

Also she is a member of the committee 'Pregnancy and Periodontal Health' of the Dutch Society of Periodontology (NVvP).

Oral health during pregnancy

Periodontitis is a chronic, multi causal inflammatory disease, caused by an aberrant immune response to dental plaque.

Characteristic of this destructive disease is loss of supporting tissue surrounding the teeth (periodontal ligament and alveolar bone), which could eventually lead to tooth loss.

Gingivitis is the precursor of periodontitis, but is solely located in the gingiva and does not result in loss of support of teeth and is reversible.

Among the pregnant women the prevalence of gingivitis has been shown to be between 30-100%, while the prevalence of periodontitis is between 5-10%. To prevent pregnancy gingivitis it is important to implement a personalized oral hygiene program in the daily care.

Presence of periodontitis in pregnant women has been associated with adverse pregnancy outcomes like preterm birth and low birth-weight. These associations are weak, but nonetheless independently present. The American College of Obstetricians and Gynecologists advises that the pregnant women should be counseled about the maintenance of a good oral hygiene and a referral to a dental professional if needed.

Prof. Meng Mao

West China Second University Hospital/West China Women's and Children's Hospital, China

Professor Meng MAO is a pediatrician, Chief Physician and Supervisor of Ph.D. students in West China Second University Hospital of Sichuan University. She is current Leader of Subspeciality Group of Children Healthcare, Chinese Pediatrics Society of Chinese Medical Association.

She previously chaired the Pediatric Committee, Sichuan province and Chengdu Medical Association and served as a member of Humanitarian Rescue Committee, International Pediatric Association. Between 2001 and 2010, she served as President of West China Second University Hospital of Sichuan University; between 2011 and 2014, she served as President of Chengdu Women's & Children's Central Hospital.

Professor Mao has been committed to clinical practice and research on growth and development, nutrition and nutritional diseases in early childhood. She has been in charge of more than 10 national research projects and has published nearly 200 papers, compiled and translated more than 10 medical monographs. Meanwhile, she has supervised more than 40 Ph.D. students.

She has won several Science and Technology Achievement Awards of provicial or ministry level. She has been elected as Expert entitled to Special Allowance from the State Council and Young to Middle-aged Experts with Outstanding Contributions of Ministry of Health.

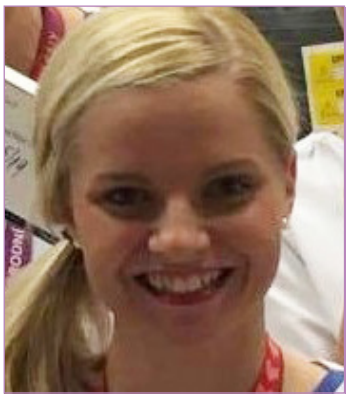
She has won the Sichuan Provincial Labor Medal twice.

Lead the trend: The first evidence-based breastfeeding guideline for 0-6 months infants in china

On June 30, 2017, the General Office of the State Council of the People's Republic of China issued the National Nutrition Plan (2017-2030) which proposed to increase breastfeeding rates and promote feeding behaviour based on the condition in China.

Breastfeeding rates are is generally low in China and in other countries worldwide, partly because of lack of breastfeeding facilities, absence of instructions for mothers, and over-publicity of infant milk products by manufacturers. In this context, China has successively issued multiple regulations to increase breastfeeding rates. In response to the national policy, the Chinese Medical Association developed the first Evidence-based breastfeeding for infants aged 0-6 months to instruct doctors and nurses on how to help mothers provide breastfeeding in a scientific and operable way.

The guideline presents common problems in breastfeeding in China, provides solutions to these problems, and emphasizes the use of breast pumps when mothers resume work or go outside.



Ms. Nika Daňková, BSc

General University Hospital in Prague, Czech Republic

Ms. Daňková is a midwife at the General University Hospital in Prague. She has been working in the perinatological unit of intensive care for more than two and half years.

Ms. Daňková is currently working at delivery hall of the perinatology center. They specialize in the care of the premature newborns at the border of life but mature children too.

She is an active member of the Czech society of midwives, which cooperates with Czech Gynecological and Obstetrical Society.

Ms. Daňková regularly attend professional conferences and congresses. She studied at a midwifery at the Faculty of Medicine in Ostrava. Currently she is adding to my education in intensive and perioperative care in obstetrics and gynecology.

Increasing breastfeeding rates through education

Authors: Petra Pařízková, Nika Daňková, BSc., Assoc. Prof. Ivan Novák, MD, Ludmila Lukešová, MSc., Eva Čejková, Veronika Kučerová

The Czech Society of Midwives (ČSPA) conducted a national e-questionnaire survey "Increasing breastfeeding rates through education" in 2016. 2,500 mothers were addressed from all regions of the Czech Republic.

The study outcomes show the average length of full breastfeeding of infants upon discharge from maternity hospital, then at the infant's age of 3 months, 6 months, and also at 12 months.

The questionnaire further focused on the impact of surgical deliveries on lactation commencement as well as describing the connection of these effects to the length of the lactation period.

Another key observation of the study was the employment of skin-to-skin bonding within the early stage after delivery and its effect on lactation start and duration. The survey produced practical outputs which can be used to maximize breastfeeding results.

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Notes

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