Introduction

Around conception, during fetal life and in infancy and childhood, nutritional and other environmental variations impact normal development with lasting effects on later health and chronic disease risk. At a time when the collective of non-communicable diseases (NCDs) is increasingly seen as a public health emergency ‘in slow motion’, the importance of the early life period in healthy development cannot be overstated. Rapid environmental changes are clearly having a detrimental impact, and have seen a sharp rise in allergy and childhood obesity. Nutritional changes are strongly implicated in these and other inflammatory diseases. Although NCDs are seen as diseases of affluence and economic development, the burden is greatest in underprivileged populations. Acute early effects and the resulting maladaptive physiological responses that drive latent long-term effects are responsible for a vicious cycle of epigenetic programming, which has seen childhood obesity driven by maternal obesity.

 Appropriately titled ‘Preventive Aspects of Early Nutrition’, the 85th Nestlé Nutrition Institute Workshop, held from 17 to 19 November 2014 in Windsor, placed these issues in the spotlight, providing a forum for key stakeholders to provoke discussion and debate the emerging data.
In the first session, presentations addressed the role of early nutrition in the development and prevention of allergy

**Susan Prescott** (School of Paediatrics and Child Health, University of Western Australia) began the workshop with a presentation highlighting the importance of early life nutritional exposures as a determinant of low-grade inflammation and later onset of NCDs. Of the NCDs, allergy is the earliest in onset and among the most common, affecting 30–40% of the general population. A period of more than two decades separates two distinct allergy epidemics, the first of asthma and respiratory allergies, and most recently an epidemic of food allergies and eczema. The latter is characterised by an even earlier onset, which has seen a 5-fold increase among preschool children in the past 10 years. In Australia, an estimated 1 in 10 1-year-olds have a clinically meaningful food allergy. It is unlikely that any single factor alone can explain this rapid and maladaptive response, but modern westernised societies show the hallmarks of animals living in captivity: abundant food, stable temperatures, no predators, good hygiene, time indoors in artificial light, and little physical exertion. These features are associated with progressive weight gain, increased C-reactive protein levels and immune changes. Indeed, a nexus between metabolism and the immune system occurs at many levels, including hormone interactions, nutrient sensing, and gut microbiota, providing a plausible link for human proneness to both immune- and obesity-associated diseases. Mechanistically, dietary triggers can mimic cell death/danger molecules, leading to non-enzymatic glycation and oxidation of proteins and lipids, and the activation of innate immune pathways. In this regard, the risk factors for allergy are similar to the risk factors of other NCDs. Strategies that promote early immune and metabolic health will have multisystem benefits as a consequence.

-An unhealthy start in life will reduce biological reserves, but is also overlaid by maladaptive responses and then by unhealthy behaviours-

-Charles Mackay

**Carina Venter** (Southampton Allergy Specialist Dietician, UK) spoke of the future of infant and young children’s food, and challenges associated with the preparation and consumption of both homemade and commercial infant foods. It is important to understand how environmental influences in early life can affect the development of the immune system and metabolic profiling. In terms of nutrition and diet, one should consider the role of the total/whole diet, as well as particular nutrients, in the development of NCDs. Early food exposure and introduction of solid food can also affect obesity outcomes, by affecting taste and food preferences to some extent. Initial results from a study at Southampton and on the Isle of Wight suggest that there is a long-term effect of consuming a cows’ milk exclusion diet in infancy on some eating habits. It appears that infants consuming a cows’ milk exclusion diet do have high levels of feeding difficulties and food neophobia (fear of new food). Food diversity in early life may also affect allergy outcomes. Nwaru et al. 2013 indicated that by 12 months of age, less food diversity was indicated that by 12 months of age, less food diversity was exclusion diet do have high levels of feeding difficulties and food neophobia (fear of new food). Food diversity in early life may also affect allergy outcomes. Nwaru et al. 2013 indicated that by 12 months of age, less food diversity was associated with increased risk of any asthma, atopic asthma, wheeze and allergic rhinitis. Another very important factor to take into consideration is maternal/paternal experience of weaning.

-There is no doubt that commercial infant foods are here to stay, due to busy lifestyles and increasing workloads, which poses the opportunity for industry to improve infant foods in order to (perhaps) stem the tide of NCDs such as allergy and obesity-

-Carina Venter

**Kirsten Beyer** (Department of Pediatric Pneumology and Immunology, University Hospital Charité, Germany) gave a presentation on nutrients and dietary strategies to prevent (Treg) cells and metabolite-sensing receptors, such as GPR43. In a mouse colitis model, lack of GPR43 exacerbates gut inflammation whereas a high-fibre diet improves colitis. Also in mice, a high-fibre diet leads to expansion of Treg cells, with deletion of these cells eliminating the benefits of dietary fibre. A key component of dietary fibre appears to be short-chain fatty acids, which are produced in high amounts along with acetate and butyrate in mice fed a high-fibre diet. Preliminary evidence in humans supports a role for dietary fibre in asthma. Low acetate levels in the blood of pregnant mothers were correlated with the development of cough and wheeze in their 1- to 2-year-old offspring, whereas high acetate levels appeared to be protective. In addition to engaging metabolite-sensing receptors, fibre components such as acetate may induce epigenetic modifications.

- Absence of dietary fibre and gut homeostasis underlie many western lifestyle diseases -

-Charles Mackay

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allergy. To prevent atopic disease, current guidelines recommend exclusive breastfeeding (EBF) of infants for the first 4–6 months. Where this is not possible, high-risk infants (≥1 parent or sibling with atopic disease) should be given hypoallergenic formula. Vitamin D or probiotic supplementation have both given conflicting results and are not recommended in guidelines. There are no data supporting the use of bacterial lysates for allergy prevention in the general population. In recent years, recommendations for food allergy prevention have shifted from avoidance strategies to active oral tolerance induction. In Australia, observational data show that early introduction of hen's eggs is associated with a childhood allergy rate of 5.6% compared with introduction after 12 months where 27.6% of older children have hen's egg allergy. Several trials are currently investigating early tolerance strategies for infants. In the STAR trial, 31% of infants with hen's egg allergy randomized to receive daily egg powder had an allergic reaction and did not continue powder ingestion. A similar proportion of infants in the egg and control (rice) groups retained their egg allergy at 12 months and the study was stopped. Preliminary data from the HEAP study, which enrolled infants from the general population, showed 6% of infants had hen's egg allergy at 4–6 months old, including 4% with clinical reactions upon oral food challenge. The EAT study is investigating the impact of sequential food exposures from age 3–4 months in infants exclusively breastfed until 3 months old compared with EBF for 6 months. Until such findings become available, current guidelines do not support early exposure or withholding potentially allergenic foods.

Current evidence does not justify recommendations about withholding or encouraging exposure to potentially allergenic foods after 4 months once weaning has commenced, irrespective of atopic heredity

– Kirsten Beyer

Anna Nowak-Wegrzyn (Mount Sinai Hospital, USA) expanded on nutritional strategies to induce tolerance in food allergic children. Current management of food allergy requires dietary avoidance, prompt recognition and management of acute allergic reactions, and anticipatory guidance. However, diverse strategies for food immunotherapy have emerged aimed at restoring oral tolerance, although there is currently no evidence that permanent tolerance can be induced (Figure 1). Extensively heated (baked) milk and egg diets have already been adopted into clinical practice and benefit the majority of milk and egg allergic children by accelerating development of tolerance to unheated milk/egg, a process that often occurs naturally by age 6 years. In peanut allergy where systemic reaction rates are high, peanut oral immunotherapy (OIT) with active treatment was significantly more effective than placebo at inducing tolerance. Twelve of 24 active-treated patients successfully passed a challenge 1 month after stopping OIT. Sustained unresponsiveness during long-term follow-up was associated with smaller skin prick test and lower allergen-specific IgE levels at baseline. However, OIT has a high rate of adverse reactions and questions remain over its long-term sustainability and the potential for eosinophilic oesophagitis. Sublingual immunotherapy (SLIT) has been investigated as a possible route for inducing tolerance. Although safe, it has marginal desensitisation effects and is limited by the dose of allergen that can be delivered. Clinical trials are currently investigating epicutaneous immunotherapy (EPIT) in peanut and milk allergy. EPIT is applied as a skin patch by the patient at home and is generally more convenient than OIT. Early data suggest EPIT is safe, but again is associated with a low level of desensitization. Long-term data are eagerly anticipated.

The aim of food allergy therapy is to first achieve desensitization and then to re-establish permanent oral tolerance

– Anna Nowak-Wegrzyn

Figure 1. Diverse strategies for food immunotherapy

Allergen-specific

- Native food proteins
  - Efficacy and safety data available
    - Milk, egg, and peanut OIT
    - Milk, peanut, and hazelnut SLIT
    - Milk and peanut EPIT
  - Safety data available
    - Milk OIT with anti-IgE
    - Peanut OIT with anti-IgE
    - Multiple food OIT

- Modified food proteins
  - Efficacy and safety data available
    - Extensively heated milk and egg diet
  - Safety data available
    - E. coli expressing recombinant modified Ara h 1, 2, 3 rectal vaccine

Allergen non-specific

- Efficacy and safety data available
  - Anti-IgE (in peanut allergy)
  - Anti-IL-5
  - Probiotics

- Safety data available
  - Chinese herbs (FAHF-2)

- Pilot data available
  - Trichuris suis ova therapy

EPIT = epicutaneous immunotherapy; IgE = immunoglobulin E; IL-5 = interleukin-5; OIT = oral immunotherapy; SLIT = sublingual immunotherapy.
In the second session, presentations examined the opportunities for reducing the risk and burden of obesity.

Matthew Gillman (Harvard School of Public Health, USA) commenced the session with a discussion of the opportunities for interrupting intergenerational cycles of obesity. Increased maternal obesity is concerning not only for its risk association with gestational diabetes, hypertension, pre-eclampsia and C-section, but also for its risk to the offspring in the form of prematurity, stillbirth, congenital anomalies, macrosomia, birth injury, childhood obesity and the many psychosocial concerns of living with obesity. Early intervention is an obvious place to interrupt the vicious cycle of obesity. Evidence for this comes from data showing that greater gestational weight gain (GWG) is associated with higher body mass index (BMI) in later childhood. The LIMIT and Healthy Moms trials both investigated the impact of limiting weight gain in overweight and/or obese pregnant women by delivering either dietary and lifestyle advice (LIMIT) or group-based, weight management intervention (Healthy Moms). In LIMIT, there was no difference in GWG between lifestyle advice and standard care, although there was an 18% reduction in macrosomia incidence in the former. In Healthy Moms (obese only), the intervention group gained an average of 3.8 kg less weight compared with the control group and also had a reduction in large for gestational age infants (9% vs 26%). These data are encouraging, and although not yet proven, interventions that prevent excessive GWG in overweight and obese women may be a promising strategy to reduce the risk of childhood obesity.

Prevention interventions starting in pregnancy, and perhaps before, have the potential to reduce excessive gestational weight gain and thus interrupt intergenerational vicious cycles.

Keith Godfrey (MRC Epidemiology Lifecourse Unit, UK) evaluated the epigenetic processes that underpin metabolic programming and the development of obesity. Animal studies indicate that early life exposures can alter epigenetic processes, including changes in development, which have major long-term consequences for growth and obesity risk (Figure 2). There is a need to define those exposures that alter optimal human growth and development, and increase susceptibility to later obesity. Maternal diet has been shown to alter DNA methylation of specific promoter CpG sites of the peroxisome proliferator-activated receptor alpha gene, with subsequent hypomethylation specific to individual CpGs in the offspring. Such observations raise the question of whether epigenetic processes underpin the ‘memory’ of developmental influences on later health and disease. There is now evidence that excessive GWG has lasting effects on offspring adiposity, while maternal vitamin D insufficiency is associated with impaired bone development and postnatal gain in adiposity. Poor quality diets are common in women with low educational attainment, and relate to fetal adaptations and childhood body composition. Moreover, the mother’s diet affects fetal liver development, with an imprudent diet associated with decreased fetal blood flow through the ductus venosus and increased liver blood flow. Potential interventions include diet and exercise prescription together with counselling and maternal vitamin D supplementation.

We need a new vision of optimal early development, recognising that maternal lifestyle, diet and body composition, and behaviour have important effects on growth and obesity risk.

Keith Godfrey

Figure 2. Maternal lifestyle, dietary and behavioural interventions driving optimal health outcomes

DM = diabetes mellitus; SIH = Southampton Initiative for Health; SWS = Southampton Women’s Survey

Piotr Socha and Christian Hellmuth (EU Childhood Obesity Group, Poland) co-presented a talk on endocrine and metabolic biomarkers that predict early childhood obesity risk. In the EU Childhood Obesity Program (CHOP) trial, investigators compared low- and high-protein infant formulas in a multicentre randomised controlled trial (RCT). Consumption of a high-protein formula was associated with increased BMI and a 2.43-fold greater obesity risk at school age compared with low protein intake during infancy. Blood and urine analyses from children showed that the high-protein formula was associated with significantly higher levels of branched-chain and essential amino acids, while IGF-1 levels at 6 months were also significantly higher in
the high-protein group. IGF-1 level and body weight were correlated with weight/height at 12 months, whereas protein intake and IGF-1 level were correlated with kidney volume. Compared with formula-fed infants, breastfed infants generally had lower plasma amino acid levels, a less active IGF-1 axis and lower insulin production.

We were able to show consistent changes in biochemical and endocrine markers that fit the hypothesis of metabolic programming of obesity.

– Piotr Socha and Christian Hellmuth

Ferdinand Haschke (University of Zalsburg, Austria) continued the theme of infant formula trials, but with a focus on improving outcomes. Meta-analytical data of infants from four continents who were fed a whey-based, low-protein formula (1.8 g/100 kcal) with an amino acid profile close to breast milk show that infants follow the World Health Organization growth standard from 0–4 months. An experimental low-protein formula (1.61 g/100 kcal) that closely approximates breast milk in its amino acid content has recently been evaluated in two RCTs in which infants were assigned to experimental or control formula from age 3 to 12 months. In a US study of the general infant population, weight-for-age of infants fed the low-protein formula was significantly lower than the control formula (2.15 g/100 kcal), and higher than a reference group of breastfed infants. The percentage of infants with weight above one standard deviation (SD) was significantly lower in the low-protein group compared with control during the entire intervention period. A second study conducted in Chilean infants of mothers with a BMI above 25 kg/m² showed significantly less weight gain in infants fed the low-protein formula compared with the high-protein (2.6 g/100 kcal) formula. At 24 months, the mean difference in body weight between the two groups was 517 g. Haschke speculated that feeding a low-protein formula to non-breastfed infants of overweight or obese mothers might reduce the adult obesity risk by 25%.

In non-breastfed infants, whey-based low-protein formulas could help prevent rapid weight gain.

– Ferdinand Haschke

Jose Saavedra (Nestlé Nutrition Institute, Switzerland) closed the session with a presentation that further explored opportunities for obesity risk reduction through infant feeding. A recent systematic review of modifiable risk factors associated with overweight and obesity found that feeding and related dietary, environmental or behavioural practices are all potential interventions beginning at birth. Additional insights come from analyses of data from the US Feeding Infants and Toddlers Study, which suggest that children develop less than ideal dietary patterns before age 2 years. The 50th percentile of energy intakes is already above what is required for optimal infant development by the age of 6 months, most toddlers are getting more saturated fat than is recommended, sodium intakes exceed tolerable upper limits, fibre intake is below recommended levels, and around 40% of infants are not getting at least one serving of a vegetable or fruit by 6–9 months old. Comparison with the NHANES database suggests the energy density of the diets of the highest tertile children is equivalent to that of the lowest tertile US adults. With a daily difference in children’s energy intake between the lowest and highest tertiles of 209–284 kcal, there are clear differences in food choices. The top food sources of infants aged 6–11 months eating a high energy density diet are non-baby meats, rice/rice mixtures, cheese, hot dogs and starchy vegetables. This contrasts with low energy density diets where baby food, infant formula and infant cereals predominate. High energy density diets in infants are also less nutrient dense, with these children taking in less dietary vitamins. Dietary considerations aside, current data suggest there is a lack of responsive feeding practices by the caregiver, with low attention to hunger and satiety cues, lack of family meals, low sleep duration, and decreased active play. Thus, effective intervention will require a holistic examination of current nutrition and parenting practices.

There is an opportunity for obesity prevention starting in early life, involving all stakeholders, in a holistic way.

– Jose Saavedra

Session 3

Complementary Feeding: Taste, Eating Behaviour and Later Health

Chairperson: Mary Fewtrell

In the third session, presentations addressed the genetic and environmental factors associated with complementary feeding (CF) outcomes.

Mary Fewtrell (Childhood Nutrition Research Centre, UK) opened the session with a presentation aimed at answering whether or not the timing, content or method of CF can improve later health and development. Although plausible, since the CF period is one of rapid growth when infants are susceptible to nutrient deficiencies and excesses, these are challenging questions to answer because there are inherent complexities associated with study design, nutritional variants, and feeding, behavioural and psychological factors associated with CF. Some evidence predominantly from observational studies suggests an increased risk of obesity if solids are introduced before 4 months. However, an RCT conducted in Icelandic infants found no difference in later adiposity between infants who were exclusively breastfed for 4 versus 6 months. Current advice to introduce gluten between 4 and 6 months alongside breastfeeding to reduce the risk of coeliac disease has recently been challenged by the findings of two RCTs, which found neither age at introduction nor breastfeeding influenced later development of this disease. Limited evidence suggests there is no impact of timing of CF on infant cognitive development. Data

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are scarce in relation to specific foods or nutrients during CF. High protein intake from meat during CF is associated with increased growth but not adiposity in breastfed infants. However, cow’s milk protein has been associated with BMI, particularly in girls where it is associated with IGF-1 levels. Finally, the findings of a study of 835 healthy Chilean infants assigned to high (12 mg/L) or low (2.3 mg/L) iron formulas from age 6 to 12 months showing decreased IQ, spatial memory and visual motor function in those given high iron suggests the need for caution when considering iron fortification.

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**Available evidence relating timing and content of complementary feeding to later health and development are limited in quantity and quality**

– Mary Fewtrell

**Leann Birch** (Department of Foods and Nutrition, University of Georgia, USA) spoke about the behavioural and psychological aspects of learning to eat. Today, many infants and young children are learning about food in obesogenic environments where feeding practices can promote maladaptive behaviours. Such practices include feeding as a default response to crying, and inappropriate portion size and feeding frequency. Responsive parenting, in contrast, fosters the development of infant self-regulation, and promotes cognitive, social and emotional development. Two RCTs are being conducted to evaluate the efficacy of intervention on weight gain in infants. In the first, the intervention teaches parents about sleep and feeding routines, soothing alternatives to feeding, hunger/fullness cues, delaying solids, and self-regulation. Mediators under investigation as drivers of the primary outcome of lower weight status and less rapid weight gain compared with no intervention include longer sleep duration, higher self-regulation and solid foods after 4 months. A second RCT of breastfeeding mothers in which the intervention involves postnatal nursing home visits at 2–3 weeks and 4–6 months has shown that weight-for-length percentiles are significantly lower compared with control. In another study investigating the association between sleep duration and lower weight status, changing the default response of breastfeeding mothers from fussing to feeding predicts higher infant BMI at 6 months. Infants of mothers who receive a basic intervention are better at self-regulating than those who do not receive an intervention. Thus, promising findings have been made regarding the impact of parenting interventions that influence feeding, sleeping and the risk of obesity.

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**Family is a critical early environment for learning about food and eating**

– Leann Birch

**Catherine Forestell** (The College of William & Mary, USA) spoke of the roles of nature and nurture in the development of flavour/taste perception and acceptance. Taste and olfactory receptors are well developed by the third trimester of pregnancy, allowing the fetus to detect the continually changing flavour profile of the amniotic fluid. At birth, the newborn is sensitive to basic tastes and within days, she/he is adept at detecting dilute sweet solutions. Preference for sweet taste remains heightened throughout childhood and only decreases during late adolescence. In contrast, the infant at birth shows aversive responses to bitter and sour tastes, with the latter transforming to a preference by 18 months of age. Salt is not detected until 2–6 months when a strong preference emerges. The infant is aversive to umami taste in water, but when presented in a food such as milk or cereal, the infant shows a preference. Thus, infant responses to basic tastes reflect an innate biology. Early experiences fine-tune innate sensory responses and contribute to individual differences in perception and acceptance. The wide range of odour volatiles encountered in amniotic fluid and breast milk reflects the mother’s cuisine and culture, with breast milk providing continuity between pre- and postnatal experiences. This confers an advantage for initial acceptance of fruit and vegetables provided the mother is herself consuming those foods. In contrast, children who receive infant formula are exposed to a monotonous flavour profile and may be less accepting of new flavour profiles. Repeated exposure to a variety of tastes and flavours associated with a healthful diet may override any innate predisposition.

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**Early flavour experiences set the stage for developing eating habits that track into adulthood**

– Catherine Forestell

**Pauline Emmett** (Centre for Child and Adolescent Health, UK) presented on dietary patterns during CF and later outcome. The Avon Longitudinal Study of Parents and Children (ALSPAC) is one of very few studies to evaluate dietary patterns during infancy. This UK cohort study of 14,000 pregnant women used a self-questionnaire to survey infant dietary patterns at 4 weeks, and 6 and 15 months. Dietary records were maintained and biometric parameters regularly assessed in a random subsample. Based on dietary recommendations at the time (1991–92), CF utility index (CFUI) score was positively correlated with IQ at age 8 years, and healthy dietary patterns at age 3 and 7 years. Older maternal age, higher maternal education and social class were associated with higher CFUI score, whereas pre-pregnancy obesity was associated with lower CFUI score. Four distinct dietary groups emerged at 6 and again at 15 months, with ‘homemade traditional’ and ‘breastfeeding/homemade contemporary’ positively correlated with maternal education; the ‘discretionary’ group was negatively correlated with maternal education and positively correlated with obesity. A fourth group, ‘ready-prepared baby food’ (RPBF), did not correlate with maternal education. Discretionary and RPBF patterns were negatively correlated with IQ, whereas breastfeeding/homemade contemporary patterns were positively correlated with IQ. These findings indicate that diet is likely to influence cognitive development during infancy and may set a trend for later eating patterns.

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**Infancy dietary patterns are associated with childhood dietary patterns and may be important in setting children on the path to healthy eating**

– Pauline Emmett

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Lucy Cooke (Health Behaviour Research Centre, UK) concluded the session and the workshop with a presentation on nature versus nurture in early feeding behaviour. The appetitive model of obesity proposes that a genetic risk of obesity operates via appetitive traits that confer susceptibility to the environment. This model was put to the test in the Gemini Study, which investigated genetic and environmental determinants of appetitive traits and their influence on body weight in 2,402 families with monozygotic and same-sex dizygotic twins born March–December 2007. The findings based on evaluation of four appetitive traits suggest that the relationship between appetite and weight gain is bi-directional; appetite predicted weight, and weight at 9 months related to appetite at 15 months. In a subsample of 228 dizygotic same-sex twins with the same birth weight but discordant for food and satiety responsiveness, the higher-appetite twin was heavier by 3 months suggesting a causal effect. High heritability in monozygotic twins for satiety and food responsiveness, food enjoyment and slowness in eating suggests a strong genetic component in feeding behaviour. The impact of specific genes was considered, with children carrying the high-risk FTO allele (implicated in overweight in adults) having the highest BMI, and those homozygous for the low-risk allele having the lowest BMI. Children with the high-risk allele scored lower in satiety sensitivity and this appetitive trait appeared to mediate the relationship between FTO and weight. These findings suggest that identification of at-risk individuals may be possible in infancy. However, further studies are needed to determine whether appetitive traits are amenable to change, such as through smaller and more frequent feeds for satiety-responsive infants, or smaller portions for food-responsive infants.

"Being able to identify appetitive traits in infancy suggests we might be able to identify infants who are particularly at risk of weight gain" – Lucy Cooke

Conclusions

The 85th Nestlé Nutrition Institute Workshop, titled ‘Preventive Aspects of Early Nutrition’, focused on allergy, obesity and CF as issues of early life that require intervention in order to prevent later sequelae. The nexus between metabolism and the immune system operates at many levels, linking our proneness to both immune- and obesity-associated diseases. Early nutritional exposures are important in allergy prevention, with breastfeeding, high dietary fibre and variety in commercial and homemade baby foods potentially paving a path to better health. The early developmental period is also important in obesogenesis where supportive interventions aimed at preventing excessive gestational weight gain (as shown by the Healthy Moms trial) will be critical in reversing the vicious cycle of obesity. The content of infant formulas is a key area to remedy since many potentially deleterious high-protein products remain on supermarket shelves around the world. The use of a low-protein formula similar in content to breast milk creates a genuine opportunity to reduce the risk of obesity in later life. Parenting and feeding practices also require close scrutiny given that they present several modifiable risk factors for obesity. The CF period is an important time of life since it sets the scene for later food preferences and eating habits. As a time for learning to eat, it also provides an opportunity for interventions aimed at supporting parents to make healthier choices and develop optimal habits for their children. The dietary patterns acquired early on set the stage for lifetime dietary practices. Finally, opportunities exist to modify recognisable appetitive traits through simple interventions at feeding time.