

NEWS RELEASE

Variety and Safety key to Successful Complementary Feeding of Infants and Toddlers

- ***Establishing early acceptance of variety of foods key to long-term healthy eating habits and chronic disease risks such as obesity***
- ***Risk from contaminants and residues higher for infants and toddlers than adults***

Vevey, Switzerland – January 2013: A significant proportion of infants in both high and low income countries have diets that are out of balance with developmental needs. Just a few simple changes to infant-specific diets to encourage acceptance of a variety of foods can have significant impact upon long-term eating habits and health. The risk of intake of environmental contaminants is one of several safety concerns for which awareness should be raised. Awareness of these key issues was brought into sharp focus at the Nestlé Nutrition Institute satellite symposium held on November 30th (2012) at the Excellence in Paediatrics (EiP) congress, in Madrid, Spain.

Achieving Adequate Nutrition in–step with needs for development is vital

Professor Raanan Shamir, from Schneider Children's Medical Center and the Sackler faculty of Medicine, Tel Aviv University (both in Israel) defined Complementary Foods (CF) as embracing all solid and liquid foods other than breast milk, infant formula and follow-on formula. He confirmed that CF should normally commence not before 17 weeks and no later than 26 weeks old, dependent upon the child's motor skills and maternal wishes. Commencing after only 6 months of age will result in increased risk not only of allergy but also of not meeting requirements for calories, protein, iron, zinc and some fat-soluble vitamins (A&D).

Successful CF is an issue of maintaining Adequate Nutrition in accordance with developmental needs.¹ Typically CF patterns have different and problematic characteristics in low and high income countries. In low-income countries, the scenario is consistently one of deficiencies in some nutrients, including iron, zinc and vitamin B6. In high-income countries, however, there is consistently too much simple sugars, salt, caffeine-containing beverages and artificially sweetened drinks, with diets insufficient in vegetables and fruits.

Establishing Variety Key

The importance of the issue of variety in CF was the focus of Dr Johanna Kuenzel, of the Nestlé Research Centre, Lausanne, Switzerland. She explained that by establishing exposure to and acceptance of a variety of foods (different fruits, vegetables, meats and dairy) in the first 2 to 3 years it is possible to positively shape long-term healthy eating habits, based upon a balanced diet.^{2,3} She stated: "If we can translate these findings into actions, ultimately they can form part of the solution to the obesity epidemic and associated public health problems."

Dr Kuenzel highlighted practical strategies to establish early acceptance of a variety of foods. Amongst a range of examples, she highlighted evidence that showed initially refused food can be accepted if offered 7-8 times^{4,5} – with 63% of infants still eating and liking the initially disliked vegetables 9 months later.⁴

Limiting Contaminant risk vital

A major threat to successful CF is unsafe practices relating to family and child consumer behaviours and environmental contaminants. Professor Shamir asserted, "Children should be fed using hygiene practices that will eliminate the risk of infection, with food that does not pose

risks such as aspiration or choking.” One of the basic ways to limit choking risk in infants for example, is to avoid food items that are too big or not soft enough, such as granola bars or non-sliced foods.

Ensuring that CF does not contain unsafe levels of contaminants – such as methyl mercury and pesticides in fish – is equally important. Professor Shamir encouraged healthcare professionals and parents to remember that infants and toddlers are not small adults and that Adult Recommended Daily Intakes do not apply. He explained that thresholds for contamination levels of infants are much lower than for older children or adults. This is because infant intestinal absorption and tissue distribution is different. Moreover, infants’ capability for enzymatic biotransformation - that is important to detoxification - is immature: he said, “Infants have different metabolism, immature defence mechanisms and sensitive developing organs. Even a short duration of over-exposure to contaminants may have damaging long-term effects on health that may not become apparent until later in life.”

As an example of how this can impact food choices on a practical level, Professor Shamir mentioned that shark, tilefish, swordfish, king mackerel all of which are high in mercury should be avoided. He agreed with recommendations that a variety of fish that are lower in mercury – such as shrimp, canned light tuna, salmon, pollock and catfish – would be safer alternatives⁶.

Professor Shamir noted there is either an absence or lack of specific and consistent regulations in regard to CF. This is despite the fact that there are a large number of food safety authority bodies and guidelines at national and international level - including those from Codex Alimentarius Commission, the Food and Drug Administration (USA) and the European Food Safety Authority. Professor Shamir considered the opportunity for the development of a united approach: “Healthcare providers, including paediatricians and regulatory bodies should establish scientifically based guidelines and recommendations to ensure the delivery of safe CF. Education programmes are required as well in order to enable consumers to act safely and make safe choices for CF.”

References

1. http://www.who.int/nutrition/topics/complementary_feeding/en/index.html
2. Maier, A.S., Chabanet, C., Schaal, B., Leathwood, P.D. & Issanchou, S.N. (2008). Breastfeeding and experience with variety early in weaning increase infants’ acceptance of new foods for up to two months. *Clinical Nutrition*, 27, 849- 857
3. Mennella, J.A., Nicklaus, S., Jagolino, A.L. & Yourshaw, L.M. (2008). Variety is the spice of life: Strategies for promoting fruit and vegetable acceptance during infancy. *Physiology & Behavior*, 94, 29–38.
4. Maier, A., Chabanet, C., Schaal, B., Issanchou, S. & Leathwood, P. (2007). Effects of repeated exposure on acceptance of initially disliked vegetables in 7-month old infants. *Food Quality and Preference* 18, 1023–1032.
5. Hausner, H., Olsen, A. & Møller, P. (2012). Mere exposure and flavour–flavour learning increase 2–3 year-old children’s acceptance of a novel vegetable. *Appetite*, 58, 1152–1159
6. <http://www.cfsan.fda.gov>

#

Notes to editors:

The **Nestlé Nutrition Institute** (NNI) fosters "Science for Better Nutrition" by sharing science based information and education to contribute to the enhancement of the quality of people’s lives all over the world. The Nestlé Nutrition Institute shares leading science based information and education with health professionals, scientists and nutrition communities and stakeholders, in an interactive way.

For more information, please consult www.nestlenutrition-institute.org

Media enquiries

Tel: +41 21 924 2200

Email: Nestlé Corporate Media Relations mediarelations@nestle.com