



Feeding in the First Year of Life: Draft SACN Report
A response from Ella's Kitchen
September 7th 2017

To: Scientific Advisory Committee on Nutrition

We welcome any new report on infant feeding, particularly one that examines the evidence supporting parental feeding practices that may improve an infant's developing relationship with food. The report is an impressive body of work synthesising many of the major studies in this area and is an important contribution to childhood wellbeing. We have comments on two specific areas of the Feeding in the First Year of Life report, outlined below. These are:

- 1. The sensitive window for the introduction of complementary foods and the vegetables-first approach**
- 2. Overt versus covert parental control**

1. The sensitive window for the introduction of complementary foods and the vegetables-first approach

- We suggest that the report's conclusion on the concept of the window of opportunity is amended to reflect the totality of evidence that shows that acceptance of bitter flavours such as vegetables is higher during the early stages of weaning - including if this begins at six months.
- We suggest that specific recommendations about the benefits and practicalities of starting weaning with vegetables is included in the final report, given the considerable experimental evidence which supports the benefits of this practice.

Point 280 highlights the fact that observational data is prone to confounding and hence, the evidence in favour of a sensitive window of opportunity for introducing commonly rejected foods like vegetables has been questioned by SACN. It is interesting to note that many observational studies are used to support the practice (which SACN recommends) of repeated exposure to foods to promote their acceptance by infants and also to support the observation that breast fed infants more readily accept new foods vs formula-fed infants.



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Few experimental studies are reported in support of the existence of the sensitive window, beyond those comparing the introduction of protein hydrolysed infant formula at various ages during infancy. While it is clearly very difficult to obtain experimental data in such a young population group, the observational evidence extends beyond those studies cited. For example, a recent study of 4779 infant participants of the large Generation R cohort in Holland demonstrated that an earlier introduction of vegetables was associated with less fussy eating behaviour at age 4 years using the food fussiness scale of the Children's Eating Behaviour Questionnaire (de Barse et al, 2017).

The experimental work of Barends et al (2013, 2014) has been cited in support of the repeated exposure approach to introducing new foods but these data additionally support the introduction of vegetables first in the complementary feeding process, offered both frequently and in variety, to promote acceptance, with the outcome of increased vegetable consumption (versus the fruit first groups) tracking into early childhood (12 months of age). This study suggests that offering vegetables early in the complementary feeding period, before more readily accepted sweet foods like fruit or cereals could be beneficial to long term eating behaviour. While those effects were attenuated at age 23 months, potentially due to children entering the neophobic phase and also due to the unfamiliar clinical setting and texture of food offered, observational data do suggest that eating habits formed in early infancy track into later childhood (Coulthard et al, 2014). It is worth noting that the majority of the studies on the repeat exposure effect have been conducted using vegetables, suggesting that vegetables require more effort before they are accepted by infants. This would imply that specific recommendations on the introduction of vegetables would be beneficial.

The randomised controlled trial conducted by Fildes et al, 2015, is cited to support the recommendation that introducing a variety of foods to infants during complementary feeding may help promote the acceptance of new foods. However, this study also suggests, in the UK specifically, where a vegetables-first approach to weaning is not common practice, that offering a variety of single vegetables, repeated every five days, for the first 15 days of weaning, can lead to better acceptance of vegetables in infants. Moreover, the work of Hetherington et al, 2015, again supports this vegetables-first approach by introducing the taste of vegetables in a step-by-step approach, first mixed with milk, then baby rice and finally alone to promote initial acceptance.

Together, these findings, along with the proceedings of a roundtable of leading UK complementary feeding experts (Chambers et al, 2016) support the recommendation that infants be introduced to vegetables early in the weaning period, when showing appropriate signs of readiness and not before 17 weeks, in a way that does not displace breastmilk from the diet. This 'tiny tastes' approach bridges the gap between milk feeding and the introduction of solid foods by facilitating the smooth transition from milk to foods that are an important part of a healthy, balanced diet i.e. vegetables. The approach is already practised in other European



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countries, such as France, Sweden and Holland (Schwartz et al. 2013; Swedish National Food Agency 2012; Netherlands Nutrition Center 2016).

SACN concludes that complementary feeding should start at around 6 months of age and that earlier introduction of food may risk displacing breastmilk from the diet. However, there is no evidence to suggest that familiarising infants with the flavour of food i.e. vegetables, during the 4-6 month window is detrimental to health. In acknowledgement of the fact that many parents do choose to wean their children before the age of 6 months (Diet and Nutrition Survey of Infants and Young Children, 2011) it would be beneficial to provide advice on the type of foods, textures and quantities offered i.e. small tastes of vegetable purees, in variety. Moreover, if we uncouple the evidence on the sensitive window of opportunity from age of introduction of solid foods, it would still be advisable, given the evidence from Barends (2013, 2014), Hetherington (2015), Fildes (2015) and de Barse (2017) to recommend that weaning begin with a variety of vegetables being introduced before fruit or cereal but alongside iron-rich foods in order to increase early acceptance of these commonly rejected foods. We would recommend further reference of the benefits to this vegetables-first approach within the “new food acceptance” section, as well as in the conclusions section.

2. Overt versus covert parental control

- We suggest that a distinction is made between overt and covert restrictions on unhealthy foods, given that covert control may have beneficial effects on health.

Point 274 deals with restricting palatable or unhealthy foods and highlights the risk that such practices may later increase the child's preference for the restricted food with negative impacts on eating behaviour and health. It would be advisable to distinguish between overt and covert restriction. Covert control, in which less healthy foods and drinks are restricted without the child's knowledge, has been shown, in the case of energy-dense snacks and sugar-sweetened beverages, to be associated with lower BMI (standardised for age and sex) and increased fruit intake (Rodenburg et al, 2014). It may therefore be of practical importance for parents to understand that covert control may have beneficial effects on health, whereas overt control may not.



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