

Complementary Feeding: A Position Paper by the European Society for Paediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) Committee on Nutrition. 2017

Fewtrell et al. *J Paediatr Gastroenterol Nutr* 64(1):119-132

This position paper proposes timing and composition of complementary feeding, feeding methods, and practices with focus on healthy term infants in Europe. Complementary feeds are liquids and solids other than human milk yet breastfeeding should continue. Complementary feeds should not be introduced later than 6 months of age. Varied textures and flavours should be introduced. Home-made and commercial weaning foods are discussed as is a vegan diet. Parents and caregivers should be reassured and listen to hunger and satiety signals from the child. Reward feeding should be discouraged [1].

Introduction

This is an update of the older position paper from 2008. There is still little evidence to base recommendations on, shown by high variation in local recommendations and different best practices between countries. Complementary or weaning foods (CF) are necessary to meet the changing nutrient and energy needs and to explore new textures, flavours and tastes for foods eaten in the family and culture. Three angles are taken into consideration and these are timing - content - method. The paper begins with definitions to set the frame.

Timing - Content - Method

Hard evidence for the ideal timing of CF is lacking and therefore controversial. The WHO proposal of six months exclusive breastfeeding has been challenged and some countries locally recommend introduction of food teasers between four and six month without reducing breast milk intake to retain protection against infections. The panel agrees that there is "no need to delay introduction of allergenic foods beyond four months". Coeliac disease, growth and body composition, neurodevelopment, type one diabetes are also discussed.

Developmentally, kidneys and intestine are mature enough to process most family foods in moderation from four months on. Coordination to swallow blended foods also start to develop at this time. Handling semi-solids is more difficult and so is the coordination to self-feed which develop around nine months. This is the period where "lumpy foods" should be introduced as it seems that it affects later intake of fruits and vegetables.

European infants seem to be at risk for excess energy, protein, sodium chloride, and potassium intakes. In contrast, some infant sub-populations are critically low in omega-3 polyunsaturated fatty acids, vitamin D and iodine.

Taste preferences can be modified by caregivers. Healthy habits can be encouraged by repeated exposure to vegetables and a high variety of vegetables. The child needs to be exposed to new textures and tastes at least 8-10 times to accept it.

Recommendations:

1. Breastfeeding

- Promote exclusive or full breastfeeding for at least four months.
- Promote breastfeeding in parallel to CF for 12-24 months.

2. Weaning

- Introduce mashed or pureed foods between four to six months of age; no later. Discourage prolonged use of pureed food beyond 12 months to ensure timely progression to finger-foods and self-feeding.
- Introduce semi-solid lumpy weaning foods around 8-10 months of age.
- The diet should be varied, include iron-rich foods with high bioavailability and bitter-tasting green vegetables. Traditional foods and feeding patterns are encouraged.
- Avoid excess gluten intake after introduction at 4-12 months.
- Offer new tastes, textures and flavours 10 times or more.
- Parents should wait until 12 month before using cow milk as main drink to reduce risk of allergy and obesity. Small volumes are deemed acceptable.
- Salt or sugar should not be added to CF.
- Fruit juices, syrups and sugar-sweetened beverages should be avoided to reduce dental caries and imprint preference for sweet taste.
- Avoid non-pasteurised honey before 12 months; it carries a risk for infant botulism.
- Introduce allergenic food (cooked egg, peanut etc.) in small quantities along CF. For infants at risk for allergy, parents should work with a trained paediatrician that holds experience in the field to define timing.
- Fennel oil and tea (potential genotoxicity) or rice drink (arsenic) intake are not recommended below 4 years of age.
- Parents should understand that a vegan diet puts the infant at risk for irreversible cognitive damage or death. Apply under medical supervision with focus on cobalamin (0.4 µg/d from birth and 0.5 µg/d from 6 months on). Pay attention to "vitamin D, iron, zinc, folate, DHA, protein, calcium, and energy density". Soy protein can be used.
- By one year of age the baby should drink mainly from a cup or training cup, not an infant feeding bottle (teat).
- Avoid comfort or reward feeding: food should be given only in response to the child's hunger signals.
- In addition, the panel advises avoidance of sucrose, discouraging the child to sleep with a bottle and encouraging good dental hygiene as soon as teeth erupt.

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References

- [1] Fewtrell M, Bronsky J, Campoy C, Domellöf M, Embleton N, Fidler Mis N, Hojsak I, Hulst JM, Indrio F, Lapillonne A, Molgaard C. Complementary feeding: a position paper by the European Society for Paediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) committee on nutrition. 2017 *J Paediatr Gastroenterol Nutr* 64(1):119-132. doi: 10.1097/MPG.0000000000001454