

codex alimentarius commission



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Agenda Item 10

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SUMMARY OF THE PROPOSAL TO REVISE THE CODEX GUIDELINES ON FORMULATED SUPPLEMENTARY FOODS FOR OLDER INFANTS AND YOUNG CHILDREN (CAC/GL 08-1991)

Prepared by Ghana

INTRODUCTION

A revised Codex Standard for Formulated Supplementary Foods for Older Children and Young Children has important implications for the nutrition and health of infants and young children, particularly those living in developing countries. Nutrition has been recognized as the foundation for survival, growth and development of children. The recent 'Lancet Series' released in January 2008 concluded that more than a third of child deaths and 10 percent of the global disease burden are due to child and maternal under nutrition. Most of the undernourished children of the world (around 80%) live in just 20 countries across four regions - Africa, Asia, Western Pacific, and the middle East. Intensified nutrition action in these countries can lead to achievement of the first Millennium Development Goal (MDG) and greatly increase the chances of achieving goals for child and maternal mortality (Millennium Development Goals 4 and 5). Despite isolated successes in specific countries or for interventions—e.g. iodized salt and vitamin A supplementation—most countries with high rates of under nutrition are failing to reach undernourished children with effective interventions supported by appropriate policies.

Children with severe malnutrition carry the highest risk of morbidity and death as individuals but the greatest population-level burden of the condition lies on the more prevalent mild and moderate malnutrition. Adequate nutrition during infancy and early childhood is fundamental to the development of each child's full human potential. However, while exclusive breastfeeding provides optimal nutrition in the first six months of life, after that time for the majority of infants in developing countries, local cereals/millets and legumes (pulse) and nuts are used for complementary feeding. **These foods are not fortified with minerals and vitamins, and thus do not contain nutrients above their inherent generally low content, and thus often are lacking in minerals and vitamins as well as total energy, essential fatty acids and possibly protein.** Most processed complementary foods currently available at low cost do not provide optimal nutrition because they are not fortified or are fortified at low levels with poorly available nutrients. They also often do not contain milk, or sources of essential fatty acids needed for optimal growth.

This background document summarizes recent evidence on complementary foods and fortified food based supplements that have shown to be successful in improving weight, height or micronutrient status of

children 6-24 months of age and the need to revise the Guidelines on Formulated Supplementary Foods for Older Infants and Children CAC/GL 08-1991 based on new relevant recent research.

Brief Scientific Rationale:

Unfortified complementary foods that are predominantly plant-based generally provide insufficient amounts of certain key nutrients (particularly iron, zinc and calcium) to meet the recommended nutrient intakes during the age range of 6-24 months. Gibson and colleagues evaluated 23 different local complementary food mixtures used in developing countries, some of which included animal-source foods. None of them achieved the desired iron density and few achieved the desired calcium or zinc density. The difficulty in meeting the needs for these nutrients during infancy and early childhood is not unique to developing countries. Average iron intakes of breastfed infants over six months of age in industrialized countries would fall well short of the recommended intake if iron-fortified products were not available and the median zinc density of complementary foods consumed by breastfed infants at 6 -12 months in the U.S. was below the desired density.

In addition to production of complementary foods with improved macro and micronutrient content, a strategy to improve the nutritional quality of home-prepared foods is *home fortification* of complementary foods with fortified supplements. Fortified food-based supplements are energy-dense spreads that contain a source of energy (fat), protein, as well as micronutrients that are eaten, in addition to breast milk and complementary foods. The function of this type of product is to improve the nutrient density and quality of traditionally home-prepared complementary foods. The ultimate goal associated with their use is to prevent micronutrient deficiencies and reverse or prevent growth faltering and malnutrition.

Optimal complementary foods such as Mi Papilla (Ecuador), Progessa (Mexico) and Favina (Vietnam) led to improvements in weight and/or height and micronutrient status. In Mexico 44 gm per day of complementary food were provided and in Ecuador, 65 gm per day through national programs. These foods have included:

- Cereal
- Nutrient-dense fat source (such as full fat soy flour, whole milk powder)
- High quality protein (range of 11%-15% calories as protein)
- Essential fatty acids (reported for Favina)
- Milk (whole milk or non-fat milk)
- Bioavailable micronutrients

Based on their nutrient content, it is likely that fortified food-based supplements will improve growth in malnourished children. Pilot projects evaluating this type of product (such as Nutributter in Ghana and Malawi and fortified full fat soy flour in China) have recently been completed. These products, provided as relatively small serving sizes (10-25 g) contained a high quality protein and nutrient dense fat source, essential fatty acids (through soy or rapeseed oil), milk (in Nutributter), and bioavailable micronutrients. All products have generally contained from about 33% -100% of RDAs and included bioavailable forms of minerals and vitamins)

Need for revision of the of “Guidelines on Formulated Supplementary Foods for Older Infants and Children CAC/GL 08-1991” to include this new category of ‘fortified food supplements’

As these new products are introduced into the feeding programs and the market place, either through public or market level initiatives, it has been recognized that there is a need to ensure both the safety and efficacy of the products, as well as to provide a clear and unambiguous description of serving sizes, nutrient levels and forms, and desired macronutrients. In many jurisdictions, these product characteristics are codified by government regulatory mechanisms, however, in many developing countries there is a need for guidance in this process. A revision of the Codex Guideline CAC/GL 08-1991 is therefore proposed. The project document for the revision of the Codex Guidelines on Formulated Supplementary Foods For Older Infants And Young Children (CAC/GL 08-1991) is attached.

PROJECT DOCUMENT¹

PROPOSAL FOR NEW WORK FOR REVISION OF THE GUIDELINES ON FORMULATED SUPPLEMENTARY FOODS FOR OLDER INFANTS AND YOUNG CHILDREN CAC/GL 08-1991

1. Purpose and scope of the revision

Undertake a revision of the Section 6 and the Annex of the Guidelines on Formulated Supplementary Foods for older infants and young children. Since these Guidelines were published, there has been new information: revised nutrient recommendations and new evidence on energy needs of breastfed children.

Section 6.1.2 of CAC/GL 08-1991 - Guidelines on Formulated Supplementary Foods for older infants and young children states: *'One hundred grammes of the product, when prepared according to the instructions, is considered a reasonable quantity which an older infant or young child can ingest easily in two or more feedings'*. Section 6.2.3 further states that 100 gm of supplementary food (dry weight) per day should contain at least 400 kcal /100 gm. Since this guideline was developed, there has been new evidence that suggests that breastfed children do not need such large amounts of energy intakes and that their consumption will interfere with breast milk output.

Table 1 shows the amount of food required by a breastfed (assuming average breast milk output) and non-breastfed child on a daily basis². 100 gm of food (400 kcal) would be close to or exceed requirements for breastfed infants and allow little room for additional foods for non-breastfed infants.

Table 1. Recommendations for feeding frequency (meals/snacks) of complementary foods by child age and breastfeeding status and energy needed from complementary food for breastfed and non-breastfed infants / young children in developing countries²⁻³.

Age of child (months)	Recommended daily feeding frequency (meals/snacks)		Energy needs from complementary foods	
	Breastfed	Not breastfed	Breastfed (kcal/day)	Not breastfed (kcal/day)
6-8	2-3	4-5	200	600
9-11	3-4	4-5	300	700
12-23	3-4	4-5	550	900

Since supplementary foods are meant to supplement the child's diet, and not completely replace all other foods including breast milk, Section 6 of CAC/GL 08-1991 needs to be revised to suggest smaller serving sizes of supplementary foods.

Additionally, the amount of nutrients suggested now in CAC/GL 08-1991 is based on the 100 g of the product. Since most children should not be expected to consume 100g of the fortified food, the fortification levels proposed are too low. The Annex of CAC/GL 08-1991 states:

¹ More background information on this proposal will be presented by Ghana in a separate CRD during the 30th Session of the CCNFSU.

² Guiding principles for complementary feeding of the breastfed child PAHO/WHO (2001), and WHO (2005) Guiding principles for feeding non-breastfed children 6-24 months of age.

'When a food is supplemented with one or more of these nutrients, the total amount of the added vitamin(s) and/or mineral(s) contained in 100 g of the food on a dry matter basis should be at least 2/3 of the reference daily requirements'.

2. Relevance and timeliness

WHO is holding a meeting from 30 September – 3 October 2008 to propose guidelines on feeding malnourished children which will discuss nutrient requirements to prevent malnutrition in developing countries (including children 6 - 24 months) and the results of this meeting will directly relate to the proposed revised Codex Guidelines on supplementary feeding. Thus this proposed revision is a very timely.

3. Main aspects to be covered

The work would involve revising Section 6 and the Annex of the Guidelines on Formulated Supplementary Foods for older infants and young children.

4. Assessment against the criteria for the establishment of work priorities.

The revision would assist governments in improving the quality of the foods used in supplementary feeding programs and sold for use by infants and young children in developing countries. It would lessen impediments to international trade by providing clear guidance for foods used in feeding programs and for young children in developing countries.

5. Relevance to the Codex strategic objectives

The proposed revision is consistent with the Strategic Plan 2008-2013 of the Codex Alimentarius Commission. It will contribute to: Goal 1 – Promoting sound regulatory frameworks, specifically Activity 1.3: “Review and develop Codex standards and related texts for food labeling and nutrition”.

It will also contribute to: Goal 4 - Promotion of seamless linkages between Codex and other multilateral bodies. The involvement of WHO, FAO, UNICEF, WFP and UNHCR in reviewing current evidence for feeding of malnourished children will be the base for this Codex revision.

6. Information on the relation between the proposal and other existing Codex documents

The Codex Standard for processed cereal-based foods for infants and young children Codex Stan 074-1981, Rev. 1 -2006 includes information on many components of cereal based foods but does not include suggested amounts to be consumed daily nor nutrient levels.

7. Identification of any requirement for and availability of expert scientific advice

None foreseen

8. Identification of any need for technical input to the standard from external bodies so that this can be planned for

None foreseen.