



EU's enforced thiamine fortification of cereal based foods for infants and young children is violating consumer's freedom of choice

Position paper of Demeter International

Thiamine (or vitamin B₁)

Thiamine was the first B vitamin identified. Lack of thiamine causes the deficiency disease called beriberi, which has been known since antiquity. Traditionally beriberi has been observed essentially in South-East Asia mainly due to the consumption of polished rice, which is very low in thiamine.

Thiamine in Directive 96/5/EC

Directive 96/5/EC on cereal-based food for babies and young children was enacted by the European Commission and the member states in 1996.¹ The directive regulates the addition of vitamins, minerals, trace elements, amino acids and other nitrogen containing compounds that may or must be used in the manufacturing of these food products. Concerning thiamine it prescribes a minimum limit value that cannot even be reached by vitamin-rich wholemeal products diluted in milk. **This situation forces producers of products originating from organic farming to add artificial thiamine to the baby food. However, organic farming associations, producers and consumers of bio-products all over Europe do not want the artificial vitamin fortification. They demand now the revision of the present directive as soon as possible in order to restore consumer's freedom of choice.**

Consumer's rights and freedom of choice

The task of the European Commission is to protect the interests of all consumer groups. When it does not change the content of 100 micrograms / 100 kcal thiamine in the cereal based food for babies and young children, which can only be reached by fortification, it does not fulfil this duty, because consumers of natural food in the EU would be punished by means of vitamin fortification. And as the newest scientific evidence (see below) shows 50 micrograms / 100 kcal are sufficient.

¹ Commission directive 96/5/EC of 16 February 1996 on processed cereal-based foods and baby foods for infants and young children. OJ N°. L 49, 28.2.1996.

Objective

The European Commission should reduce the limit value for vitamin B₁ (thiamine) in cereal based food for babies and young children to a level that can be achieved without fortification with synthetic vitamin. Our suggestion is 50 micrograms/100 kcal instead of the today's 100 micrograms/100 kcal. This value of 50 micrograms / 100 kcal is in accordance with calculations of the German Society for Nutrition (DGE) with regard to the necessary daily intake of thiamine and with the opinion of the experts of Codex Alimentarius.

New Recommendation of the US Medical Research Council concerning Thiamine

The US Medical Research Council has recently (1998)² reviewed the dietary requirements during early life and childhood. For infants the adequate intakes have been established at 200 micrograms and 300 micrograms per day, during the first six months and the second six months of life respectively. The recommended dietary intake for young children aged 1 to 3 years is estimated at 500 micrograms per day. These recommendations are lower as compared to the 1989 Recommended Dietary Allowances of 400 and 700 micrograms per day respectively for infants and for young children.³

² Institute of Medicine (1998): "Dietary reference intakes for thiamin, riboflavin, niacin, vitamin B6, folate, vitamin B12, pantothenic acid, biotin and choline." National Academy Press. Washington D.C.

³ National Research Council (1989): "Recommended dietary allowances", 10th edition. National Academy Press, Washington D.C.



Taking into consideration the daily energy requirements of 850 kcal and 1300 kcal for infants aged 6 to 12 months and 1 to 3 years of age respectively (Walker & Watkins, 1997)⁴ and using these recommendations, the following thiamine levels expressed per energy density are proposed:

Age group of infants	Thiamine requirement recommended daily intake	Thiamine requirement (Per day - per 100 kcal)
6 – 12 months	according to US RDA (1989): 400 micrograms according to US DRI (1998): 300 micrograms	according to US RDA (1989): 47 micrograms according to US DRI (1998): 35 micrograms
1 –3 years	according to US RDA (1989): 700 micrograms according to US DRI (1998): 500 micrograms	according to US RDA (1989): 54 micrograms according to US DRI (1998): 38 micrograms

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⁴ Walker & Watkins (1997): “Nutrition in Pediatrics: Basis science and clinical applications”, 2nd edition. Decker, Hamilton – London.