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Should infant and follow-on formula continue to contain arachidonic acid in the future?



Position paper of the European Academy of Paediatrics and the Child Health Foundation

From February 2020 onwards, new standards for infant and follow-on formulae will be in effect in the European Union (Commission Delegated Regulation 2016/127). They stipulate the obligatory addition of the omega-3 fatty acid docosahexaenoic acid (DHA) at concentrations 2-3 times higher than typically found in human milk and in DHA containing infant formula used during the last 2 decades. However, there is no obligation to add the omega-6 fatty acid arachidonic acid, which is also always provided with human breast milk.

Major concerns haven been raised on this novel composition of formula for infants stipulated by the EU legislation, because suitability and safety has not been established in clinical studies. Therefore, the non-profit Child Health Foundation (www.kindergesundheit.de), in co-operation with the European Academy of Paediatrics (www.eapaediatrics.eu), held a scientific workshop with international paediatricians and researchers competent in this area as well as representatives of parent organizations to explore the issues that arise here. The conclusions and recommendations were now published in a leading international scientific journal (see below).

The experts stress that human breast milk is the first choice for feeding infants, and it is also the reference that guides composition of bottle feeds. In contrast to the formula composition proposed by the new EU legislation, breastmilk always provides both DHA and arachidonic acid, with mean arachidonic acid levels being higher (0.5% of fat) than those of DHA (0.3%). In the infant, these complex fats are deposited in relatively large amounts in the growing brain and in immune cells. Controlled clinical studies compared effects of infant formulas with different contents of these fats. Formula with high DHA but low arachidonic acid concentrations induced attenuated results of child development tests up to the age of 9 years, and it also reduced brain arachidonic acid contents in infant primates.

Therefore, the experts criticize the new European regulation for infant formula. They strongly recommend providing infants, who are not or not fully breastfed, with infant formula that supplies both DHA and arachidonic acid, with at least the same amount of arachidonic acid as of DHA. Formulas with such a composition more similar to human milk have been shown to be suitable and safe in numerous studies and have been widely used for more than 20 years.

Berthold Koletzko, Karin Bergmann, J. Thomas Brenna, Philip C. Calder, Cristina Campoy, M. Tom Clandinin, John Colombo, Mandy Daly, Tamás Descsi, Hans Demmelmair, Magnus Domellöf, Nataša Fidler Mis, Ines Gonzalez-Casanova, Johannes B van Goudoever, Adamos Hadjipanayis, Olle Hernell, Alexandre Lapillonne, Silke Mader, Camilia R. Martin, Valerie Matthäus, Usha Ramakrishan, Cornelius M. Smuts, Sean JJ Strain, Conny Tanjung, Patrick Tounian, Susan E. Carlson, on behalf of the European Academy of Pediatrics and the Child Health Foundation. Should formula for infants provide arachidonic acid along with docosahexaenoic acid? A position paper of the European Academy of Pediatrics and the Child Health Foundation. American Journal of Clinical Nutrition 2019, doi.org/10.1093/ajcn/nqz252; published 26 October 2019.

<u>About the Child Health Foundation:</u> Since 1996, the Child Health Foundation has been informing the public about reliable knowledge and recommendations on important health issues. In cooperation with competent partners and specialists, it develops preventive measures based on current scientific findings, e.g. for day-care centres, kindergartens and schools.

Link to the Journal website here.