



GLOBAL ORGANIZATION FOR EPA AND DHA OMEGA-3S

European Commission  
Sent via email to [fruzsin.nyemecz@ec.europa.eu](mailto:fruzsin.nyemecz@ec.europa.eu)

27 June 2019

Dear Dr. Nyemecz:

GOED, the Global Organization for EPA and DHA Omega-3s, is a trade association representing 170+ companies worldwide that are active in the EPA and DHA omega-3 industry. GOED's membership includes all segments of the omega-3 supply chain from fishing and seafood companies to refiners, supplement manufacturers, food and beverage marketers and pharmaceutical companies. GOED's members agree to adhere to product quality and ethical standards that represent the benchmark for quality in the omega-3 market. GOED's mission is to increase global consumption of EPA and DHA and ensure that our members produce quality products that consumers can trust.

**GOED writes to encourage the addition of DHA to complementary foods intended for infants and young children up to three years of age.** Addition of DHA to complementary foods will help prevent DHA deficiencies in European infants and young children which are of particular concern during and after the weaning period. Thus said, any new or updated regulation regarding the composition of complementary food should include reference to the addition of DHA.

**DHA function and physiological need:** Docosahexaenoic acid (DHA), a long-chain omega-3 fatty acid, is the central nervous system's major structural lipid. It is contained in very high concentrations in brain tissues such as brain grey matter and the retina. Its biophysical and biochemical properties influence cell properties and functions. DHA's roles for brain and retinal function are well accepted as are cause and effect relationships between DHA consumption and the maintenance of normal brain function and vision.<sup>1</sup> DHA contributes to the young brain's development by accumulating large amounts of DHA, particularly during the first two years of life.<sup>2</sup>

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<sup>1</sup> EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA); Scientific Opinion the substantiation of a health claim related to docosahexaenoic acid (DHA) and maintenance of normal (fasting) blood concentrations of triglycerides (ID 533, 691, 3150), protection of blood lipids from oxidative damage (ID 630), contribution to the maintenance or achievement of a normal body weight (ID 629), brain, eye and nerve development (ID 627, 689, 704, 742, 3148, 3151), maintenance of normal brain function (ID 565, 626, 631, 689, 690, 704, 742, 3148, 3151), maintenance of normal vision (ID 627, 632, 743, 3149) and maintenance of normal spermatozoa motility (ID 628) pursuant to Article 13(3) of Regulation (EC) No 1924/2006. EFSA Journal 2010;8(10):1734.  
<https://efsa.onlinelibrary.wiley.com/doi/pdf/10.2903/j.efsa.2010.1734>

<sup>2</sup> EFSA Panel on Dietetic Products, Nutrition and Allergies: Scientific Opinion on the substantiation of a health claim related to DHA and contribution to normal brain development pursuant to Article 14 of Regulation (EC) No 1924/2006. EFSA Journal 2014;12(10):3840  
<https://efsa.onlinelibrary.wiley.com/doi/pdf/10.2903/j.efsa.2014.3840>



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**DHA is present in significant amounts in human milk**, providing exclusively breastfed infants with approximately 100-250 mg/day DHA. In 2013, the European Food Safety Authority (EFSA) recommended the mandatory addition of DHA to infant and follow-on formulae which was followed by the adoption of *Regulation (EU) 2016/127* mandating the addition of DHA (20-50 mg per 100 kcal) to EU-sold infant and follow-on formula from 22 February 2020.<sup>3,4</sup>

**Low intake of DHA-rich foods:** For the majority of nutrients, complementary feeding, beginning between four to six months of age, is able to make up for the increasingly lower amounts of nutrients provided by breast milk during the weaning period. This is not the case for DHA that - besides in breast milk and infant formula - is only contained in relevant amounts in seafood which, unfortunately is not commonly consumed by infants and young children. Even if seafood consumption tends to increase with age, a significant number of very young consumers do not eat fish.

- In a representative study from Germany with 816 subjects, it was reported that over 90% of 6-12-month olds consume no fish.<sup>5</sup>
- In a representative English sample of 1,131 8-month old infants, 75% were found to be non-consumers of fish.<sup>6</sup>
- In a representative UK sample, 37% of 2-5-year olds did not consume fish.<sup>7</sup>

**DHA intake recommendation cannot be met:** Given the lack of fish intake, it comes as no surprise that typically decreasing intakes of breast milk (or DHA-supplemented formula) during the weaning period are directly connected with declining DHA status.<sup>8</sup> Unless significant amounts of fish are consumed, meeting EFSA's n-3 LCPUFA recommendation of 100 mg/day of

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<sup>3</sup> Commission Delegated Regulation (EU) 2016/127 of 25 September 2015 supplementing Regulation (EU) No 609/2013 of the European Parliament and of the Council as regards the specific compositional and information requirements for infant formula and follow-on formula and as regards requirements on information relating to infant and young child feeding. [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L\\_.2016.025.01.0001.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2016.025.01.0001.01.ENG)

<sup>4</sup> EFSA NDA Panel (EFSA Panel on Dietetic Products, Nutrition and Allergies), 2014. Scientific Opinion on the essential composition of infant and follow-on formulae. EFSA Journal 2014;12(7):3760, 106 pp. doi:10.2903/j.efsa.2014.3760

<https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2014.3760>

<sup>5</sup> Kersting M, Clausen K (2003) Ernährungsphysiologische Auswertung einer repräsentativen Verzehrsstudie bei Säuglingen und Kleinkindern VELS mit dem Instrumentarium der DONALD Studie - Schlussbericht. Forschungsinstitut für Kinderernährung, Dortmund

<sup>6</sup> Noble S, Emmett P, ALSPAC Study Team. Food and nutrient intake in a cohort of 8-month-old infants in the south-west of England in 1993. Eur J Clin Nutr. 2001; 55:698-707.

<sup>7</sup> Kranz S, Jones NRV, Monsivais P. Intake Levels of Fish in the UK Paediatric Population. Nutrients. 2017; 16:9-E392.

<sup>8</sup> Fewtrell M, Bronsky J, Campoy C, et al. Complementary Feeding: A Position Paper by the European Society for Paediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) Committee on Nutrition. J Pediatr Gastroenterol Nutr. 2017; 64:119-132.

[https://journals.lww.com/jpgn/Fulltext/2017/01000/Complementary\\_Feeding\\_A\\_Position\\_Paper\\_by\\_the.21.aspx#pdf-link](https://journals.lww.com/jpgn/Fulltext/2017/01000/Complementary_Feeding_A_Position_Paper_by_the.21.aspx#pdf-link)



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DHA for <24 months and 250 mg/day of EPA+DHA for 24 to <36 months<sup>9</sup> is virtually impossible. For this reason, complementary foods should be fortified with DHA.

**Very little DHA today in complementary food:** In a recent store check in three German supermarkets<sup>10</sup>, a total of 522 baby food products were identified. With the exception of infant and follow-on formula, less than 2% contained fish. Considering only savory meals, still less than 5% included fish. In those products that contain fish, their content typically does not exceed 8-12%. Also, lean species with relatively low contents of DHA such as Alaskan pollock constitute a large proportion. A children's menu of 200 g containing 10% Alaskan pollock provides approximately 85 mg of DHA. One meal per week converts to a daily average intake of only 12 mg DHA. Hence, today, complementary foods satisfy infants' and young children's DHA requirements only to a very limited degree.

**DHA recommended for young children formula:** In a recently updated consensus paper, the Committee on Nutrition of the German Society for Pediatrics and Adolescent Medicine suggests considering DHA fortification of young child formula (1-3 years old). For young children, this would be one option for addressing gaps in the supply of those nutrients, which intake levels have been identified as inadequate. Based on a young child formula drink, the Committee provides guidance on nutrient composition and recommends a minimum DHA inclusion of 15 mg/100 kcal, targeting to provide 15% of the adequate intake (AI) for DHA through this type of food.<sup>11</sup>

**Infants' and young children's DHA intakes are very low:** The limited data that exists regarding DHA intake in the population of interest demonstrates intakes falling very short of EFSA's recommendations.<sup>12</sup>

- A Flemish study in pre-school children found DHA intakes of 5 mg and below in 25% of the 2.5-3-year old participants. The study reports mean intakes of not more than 43 mg/day, which, due to the skewed distribution of DHA intakes (as found in nearly all populations), still are not met by over 75% of the participants (25<sup>th</sup>-75<sup>th</sup> %-ile: 5-39 mg).<sup>13</sup>

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<sup>9</sup> EFSA NDA Panel (EFSA Panel on Dietetic Products, Nutrition and Allergies), 2013. Scientific Opinion on nutrient requirements and dietary intakes of infants and young children in the European Union. EFSA Journal 2013;11(10):3408, 103 pp. doi:10.2903/j.efsa.2013.3408

<https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2013.3408>

<sup>10</sup> Store check conducted on 28 March 2019 by staff of a GOED member company.

<sup>11</sup> Koletzko B et al. Ernährungskommission der Deutschen Gesellschaft für Kinder- und Jugendmedizin e. V.: Folgenahrungen für Kleinkinder im Alter von einem bis 3 Jahren (sog. Kindermilchgetränke). Stellungnahme der Ernährungskommission der Deutschen Gesellschaft für Kinder- und Jugendmedizin (Aktualisierung April 2017). Monatsschr Kinderheilkd. 2018; 166:57-61.

<sup>12</sup> EFSA Panel on Dietetic Products, Nutrition, and Allergies (NDA): Scientific Opinion on Dietary Reference Values for fats, including saturated fatty acids, polyunsaturated fatty acids, monounsaturated fatty acids, trans fatty acids, and cholesterol. EFSA Journal 2010; 8(3):1461

<https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2010.1461>

<sup>13</sup> Sioen I, Huybrechts I, Verbeke W, Camp JV, De Henauw S. n-6 and n-3 PUFA intakes of pre-school children in Flanders, Belgium. Br J Nutr. 2007; 98:819-25.



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- Germany's Dortmund Nutritional and Anthropometric Longitudinally Designed (DONALD) Study reports mean ( $\pm$  SD) DHA daily intakes at 6- and 9-months of age of 47 (119) mg and 28 (161) mg, respectively. These results not only point to very low intakes in a critical period for infants' brain and eye development, but, considering that weaning typically starts around 6 months, the reported numbers clearly demonstrate the decline in DHA intake connected to the transition to complementary feeding. Considering the generally skewed distribution of DHA intake assessments<sup>14, 15</sup> – (driven by relatively few fish consumers compared to non-consumers) - it can be expected that the majority of participants' intakes are below the already low mean levels. Following the Flemish study's distribution pattern, it seems likely that a significant proportion of infants participating in the DONALD study reaches less than half of the mean intake which for the group of 9-month-olds converts into DHA intakes of 14 mg/day and below.

Based on its review of the limited intake data available, EFSA acknowledged that “Dietary intakes of alpha-linolenic acid (ALA), docosahexaenoic acid (DHA), iron, vitamin D and iodine (in some European countries) are low in infants and young children living in Europe and particular attention should be paid to ensuring an appropriate supply of ALA, DHA, iron, vitamin D and iodine in infants and young children with inadequate or at risk of inadequate status of these nutrients...”<sup>16</sup>

To conclude, for the aforementioned reasons, GOED believes any new or updated regulation regarding the composition of complementary food should include reference to the addition of DHA. Should you have any questions or wish to discuss the contents of this letter, please do not hesitate to contact me at [harry@goedomega3.com](mailto:harry@goedomega3.com) or +1 612-600-6499.

Sincerely,

A handwritten signature in blue ink, appearing to read "Harry B. Rice".

Harry B. Rice, PhD  
Vice-President, Regulatory & Scientific Affairs

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<sup>14</sup> Howe, P., et al: Dietary intake of long-chain n-3 polyunsaturated fatty acids: contribution of meat sources. *Nutr.* 2006; 22:47–53.

<sup>15</sup> Meyer BJ. Australians are not Meeting the Recommended Intakes for Omega-3 Long Chain Polyunsaturated Fatty Acids: Results of an Analysis from the 2011-2012 National Nutrition and Physical Activity Survey. *Nutrients.* 2016; 24:8:111.

<sup>16</sup> European Food Safety Authority (EFSA), EFSA Panel on Dietetic Products Nutrition and Allergies (NDA) (2013) Scientific opinion on nutrient requirements and dietary intakes of infants and young children in the European Union. *EFSA J* 11(10):3408

<https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2013.3408>