

Has the key role of Arachidonic Acid in the development of neural systems in infants been forgotten? – a topical review

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Arachidonic Acid (ARA) is an omega 6 fatty acid naturally and ubiquitously present in breast milk, irrelevant of the mother's diet. The universal presence of ARA in breast milk suggests its biological importance in the developing fetus and infant. It can be shown that ARA works in combination with docosahexaenoic Acid (DHA), an omega-3 fatty acid, providing unique but also intertwined benefits, particularly to the developing central nervous system. Much of the original research into the key nutritional importance of ARA inclusion in infant formula dates back to the late 1980's and early 90's – and as such has often fallen outside the range of meta-analyses carried out in recent years.

In 2014, the European Food Safety Authority (EFSA) issued a Scientific Opinion¹ that classified ARA as an 'unnecessary' nutrient. This contradicts years of internationally recognised standards, and if incorporated into the new European Delegated Act on the composition of Infant Formula, could have unknown consequences for infants' health and negative consequence for European innovation in formula development.

There is an abundance of scientific evidence, including over 30 years of expertise by the Food and Agriculture Organisation and the World Health Organisation² backed by many clinical trials, confirm that ARA and DHA utilised together are essential to brain development and vision.

In the current, but soon to be superseded, EU regulations on the composition of infant formula, the addition of DHA and ARA is optional according to a recommended specific ratio set in EU legislation³. This presentation reviews the science behind ARA and will provide strong arguments that ARA, along with DHA, should be considered mandatory.

¹EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA), Scientific Opinion on the essential composition of infant and follow-on formulae, Parma, Italy, 2014, available at: <http://www.efsa.europa.eu/en/efsajournal/doc/3760.pdf>

²FAO/ WHO Joint report, Fats and Fatty Acids in Human Nutrition, Report of an expert consultation, Food and Nutrition Paper no 91, FAO, Rome, Italy, 2010, available at : <http://foris.fao.org/preview/25553-0ece4cb94ac52f9a25af77ca5cfba7a8c.pdf>

³European Directive 2006/141/EC