

Reasons for an Update of French Nutritional Recommendations on Fatty Acids and Impacts on Claim Evaluation

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French recommendations on fatty acids (FAs) (1) include values for adults for total, saturated (SFAs) and monounsaturated fatty acids (MUFAs). As regards polyunsaturated fatty acids (PUFAs), values are determined for adults for some (linoleic acid LA, alpha-linolenic acid ALA, total long-chain (LC) PUFA and docosahexaenoic acid DHA), but not all PUFAs (eicosapentaenoic acid EPA for example). An LA/ALA ratio of about 5 is also recommended for adults.

However, new data show that existing values need updating and new values should be proposed. Conversion of n-3 precursor ALA into LC n-3 PUFA is very low in humans. A recommended intake for EPA and a revised one for DHA or a combined EPA and DHA value could be proposed. The setting of an upper limit for LA is also being discussed at the international level, which could help the recommended LA/ALA ratio to be met. Data also suggest the possible implication of an excessive LA intake on adipose tissue development and its possible link to obesity (2). Finally, SFA contribution to total daily energy and the different nutritional effects of each SFA need further consideration.

Afssa therefore initiated a scientific evaluation, from cellular studies to clinical trials, to update French FA nutritional recommendations. Considering impacts of ratios between FAs as well as body synthesis, all FAs should be taken into account. This multidisciplinary approach covers various physiological functions, ages and physiological stages. Preliminary conclusions will be presented. This in-depth scientific review should impact future Afssa research on nutrition, such as the evaluation of claim substantiation. In 2003, Afssa proposed criteria for substantiating nutritional claims on n-3 FA, based on French recommended ALA and DHA intakes. The review of FA physiological functions needed for setting recommended intakes will also help to evaluate the substantiation of new claims, related to brain function or cosmetology for example.

(1) Legrand P. in Martin A. (coord.) (2001) Nutritional recommendations for the French Population (English condensed edition). Sciences des aliments. 21 (4) : 348-61.

(2) Ailhaud G. et al (2006) Temporal changes in dietary fats: Role of n-6 polyunsaturated fatty acids in excessive adipose tissue development and relationship to obesity. Prog Lipid Res, 45: 203-36.