New French Nutritional Guidelines for Fatty Acids

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The French Food Safety Agency (ANSES) recently published the adult French population reference intakes ‘Apports Nutritionnels Conseillés’ (ANC) for fatty acids. This paper describes the thinking behind the 2010 update of the recommendations for fatty acid intakes for the French population. It presents the recommendations and highlights some of the rationale underlying them. The paper does not provide a comprehensive review of the science underlying each recommendation as this information can be found in the two reports that are referenced the “Complete Report on the Update of the French population reference intakes for fatty acids” and the “Opinion of the French Food Safety Agency on the update of the French population reference intakes”.

This is a nutrition science paper reflecting the complex nature of the science behind the recommendations. In doing so, it does not discuss specific areas of foods or of food intakes but rather presents an account of the process and objectives of the Food Safety Agency’s methods in reviewing the science and setting the new recommendations. The driving factors leading to the new French recommendations include concerns regarding:

- the proportion of total fat in the diet;
- the proportion of total saturated fatty acids in the diet and the differential effects of different saturated fatty acids;
- interactions between linoleic and alpha-linolenic acids;
- promoting adequate intakes of EPA and DHA; and
- understanding the roles of non-essential fatty acids.

There are many fatty acids with varying and multiple functions. Some fatty acids are essential, some are considered “conditionally essential” and other fatty acids (polyunsaturates, monounsaturates, and saturates) are nutrients that can be synthesized de novo by the body. With the goal of helping to build a credible diet, both qualitatively and quantitatively, all the main fatty acids, including those that humans can synthesize, were investigated as all have biological functions. The ANC is a reference value that encompasses the physiological requirements for almost the entire population and is similar to ‘adequate intake’ (AI). The values concern healthy individuals and include the objective of maintaining good health which corresponds to the limits of primary prevention.

The reference intakes (ANC) for each fatty acid were established based on considerations regarding both minimum physiological requirements and possible physiopathological aspects. The scientific data led to the following recommendations:

- new proportion of total lipids in total energy intake, with respect to overall balance between macronutrients and data related to preventing metabolic syndrome, cardiovascular risk and EFA deficiency;
- confirmed ANC for linoleic acid resulting from both the importance of reaching a total PUFA that promotes cardiovascular prevention, and limiting intake to avoid adverse effects in case of excess and maintain a linoleic acid/α-linolenic acid ratio of less than 5;
• increased ANC for α-linolenic acid upward with the aim of preventing cardiovascular diseases and increasing the conversion to EPA and DHA;
• increased ANC value for DHA, because of its very low rate of conversion from α-linolenic acid, which is now clearly documented;
• ANC for EPA, based on prevention data, for cardiovascular diseases in particular;
• distinguishing among saturated fatty acids, the subgroup of lauric, myristic and palmitic acids considered to be atherogenic in excess, and establishing a maximum value for this subgroup as well as for total saturated fatty acids;
• ANC for oleic acid, the predominant component of the MUFA group in the diet rather than for MUFA which is an heterogeneous group.

Among the most notable recommendations, the French have determined that for their population: total fat in the diet should be between 35-40% of total energy; total saturated fats should be below 12%; lauric, myristic and palmitic acids should in total be below 8%; oleic acid should be between 15-20%; the ratio of linoleic acid/alpha-linolenic acid should be less than 5; alpha-linolenic acid 1%; and both DHA and EPA intakes should be at least 250mg each.

However, dietary lipids are not limited to the fatty acids for which an ANC can be established, and many others fatty acids are likely to be of interest as future research is likely to demonstrate. The paper provides a comparison with other guidelines.