

# **Animal Nutrition and Lipids in Animal Products and their Contribution to Human Intake and Health**

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In spite of the recognised benefits of reducing saturated fatty acid (SFA) intake few parts of the EU meet recognised targets. Milk and dairy products represent the single largest source of dietary SFA in most countries yet epidemiological evidence indicates that milk has cardioprotective properties such that simply reducing consumption of dairy foods to meet SFA targets may not be a sound public health approach. This paper explores the options for replacing some of the SFA in milk fat with *cis*-MUFA through alteration of the diet of the dairy cow and the evidence that such changes can improve the indicators for CHD and CVD in general in the consumer. In addition, the beneficial effects of long chain (LC) (carbon chain  $\geq 20$ ) n-3 PUFA are well documented but recent evidence indicates that few people achieve the UK daily recommended intake for adults of 450 mg of EPA + DHA per day. In many parts of Europe the daily intake of EPA + DHA by adults and especially young people is less than 100 mg per day, since many never eat oily fish. There is also concern that intake of n-6 PUFA has increased excessively and is aggravating the effects of low LC n-3 intake. Poultry meat contributes small but worthwhile amounts of EPA + DHA and studies to enrich the EPA + DHA content of animal-derived foods will be described and how this would impact on habitual intake. Research is however required to characterise the benefits associated with lipid-modified foods and to understand how the active compounds in natural foods can be enhanced. In the future, the role of animal nutrition in creating foods closer to the optimum composition for chronic health is likely to be more important but production of such foods on a scale that will substantially affect national diets will require political and financial incentives and great changes in the agro-food industry