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Trans fats: towards a global ban on using partially hydrogenated oils

Very recently, Golomb and coworkers published a paper with the meaningful title "A Fat to Forget" in which they show evidence that the consumption of dietary trans fatty acids (TFAs) predicted declines in memory, and that memory became worse with increased intake of trans fats (1). This is only one of the recent additions to the list of evidence of the harmful effects of TFAs on human health. However, while for years TFAs have been a well-recognised risk factor for the development of cardiovascular diseases and associated with all-cause mortality (2), products with high TFA levels can still be found in some markets. An extensive market basket investigation of biscuits in 20 European countries performed by Stender and co-workers showed that TFA levels in foods in Eastern Europe are much higher than in Western Europe (3). These results suggest that some population groups might still be consuming TFAs in amounts that increase their health risks.

TFAs are isomers of unsaturated fatty acids which are not synthesised by the human body and not required in the diet. Their biggest source in the diet is processed foods which contain partially hydrogenated oils (PHOs). These are used to produce semi-liquid and solid fats that can be included when producing foods such as margarine, shortenings and biscuits with a long shelf life. Such products can constitute up to 60% of TFAs (3). PHOs can also withstand repeated heating and are therefore used for frying. For these reasons, as well as consumers' positive perception of vegetable fats (compared to animal fats), PHOs became very popular in the middle of last century.

The first safety concerns with TFAs present in PHOs emerged in the 1970s and suggested an increased risk of coronary heart disease. Based on strong scientific evidence, it was concluded that TFA intake should be as low as possible within the context of a nutritionally adequate diet (4). Responsible food manufacturers reformulated food products and stopped using PHOs, while policymakers started to regulate this area. Various food policies are being used in different countries to limit dietary intake of TFAs, for example mandatory labelling of the presence of PHOs (currently in use in the EU), labelling of the content of TFAs, and the most restrictive policy – regulatory limits on TFA content in foods.

In Canada and the USA, compulsory labelling of the amount of TFAs in foods was introduced in 2005 and 2006, respectively. In 2013, the US FDA published a preliminary report stating that PHOs were no longer Generally Regarded as Safe (GRAS) and, very recently, in June 2015, it was decided that PHOs will no longer be allowed in foods (5). The food industry has a three-year compliance period to phase out industrial TFAs.

In the EU, mandatory labelling of PHOs on pre-packed food products was introduced in the 1990s. Currently, PHOs must be labelled on ingredient lists as "partially hydrogenated fat/oil", but there are no general EU limits on TFA levels in foods. Most members currently rely on food producers to voluntarily reduce TFAs. Denmark was the first EU country to introduce legislative limits on TFAs in 2004, prohibiting the sale of foods containing more than 2 g of industrial TFAs per 100 g of fats. Similar rules were introduced later in Austria (2009) and in Hungary (2014).

The acceptance of Regulation (EU) No 1169/2011 on the provision of food information to consumers (6) provided an opportunity to harmonise this issue on the EU level. According to this regulation, the EC shall prepare a report on the presence of TFAs in foods and in the overall diet of the EU population, including a proposal to provide information about TFAs to consumers or restrictions on their use. The EC shall accompany this report with a legislative proposal, if appropriate (6).

While such a report should have been published before December 2014 it has been delayed and its publication is expected these days. The EC has been under strong public pressure to resolve this issue as soon as possible. A number of organisations, including the European Society of Cardiology, have called on European policymakers to ban the use of industrial TFAs. It seems that member states are also in favour of such a decision, and there are no opponents publicly defending the use of PHOs in foods. It seems like an excellent opportunity to *permanently forget* PHOs as a food ingredient also in the EU. While this would be a significantly delayed decision, it would be a very important one. Because several countries are looking closely at food policy decisions in the EU, such a decision would also have a strong global message.

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