

The TransSwissPilot study – Occurrence of *trans* Fatty Acids in Foodstuffs purchased in Switzerland

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Objectives. The intake of *trans* fatty acids (TFA) originating from the industrial process of partial oil or fat hydrogenation has been identified as a risk factor for cardiovascular diseases. Since only very limited information about the TFA content of food sold on the Swiss market was available, a broad selection of food items suspected to contain TFA were analyzed to obtain an overview of the situation. **Material and Methods.** We selectively purchased 120 food items (puff pastries, cakes, wafers, chocolate bars, ice cream, cookies, breakfast cereals, cooking oils & fats, margarines, fast food and other fried food) from retailers, bakeries and restaurants in the city of Zurich between February and August 2006 and analyzed them for their content of 18:1, 18:2, and 18:3 TFA by gas chromatography. TFA were defined as industrially originated TFA if the proportion of vaccenic acid (t11 18:1) was <45 % of the total 18:1 TFA content. **Results.** The total TFA proportion ranged from 0 to 29 % of total fat with the highest content found in a hydrogenated rapeseed fat. Thirty percent of the analyzed samples had a content of more than 2 % industrial TFA. Trans-18:1 were the predominant TFA in all samples except for the plant oils, in which the 18:2 + 18:3 TFA isomers made up to 80 % of the total TFA content. However, in these oils the total TFA content was always below 2 %. **Conclusion.** The finding that 30 % of the analyzed food items had a higher total TFA content than legally tolerated in Denmark, the only country having adopted a limit for TFA in food, was surprising. Although the main Swiss food retailers now have declared to reduce the TFA content in most of their products in order to meet the limit of 2 % TFA within the next years, it is suggested that a legal limit shall be introduced in Switzerland and/or that an obligation to declare the TFA content on the food composition label shall be considered. **Support.** This work was partially supported by the Swiss Federal Office of Public Health (grant number 05.002802)