



# Are *trans* fats a problem in Australia?

What is in our food should be on the label

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**T**rans fatty acids (TFAs) are produced by the food industry during partial hydrogenation of edible vegetable oils, such as soybean oil, canola oil and cottonseed oil. This industrial process leads to oils that are more solid at room temperature and have better physical properties for food processing, including increased shelf life. Low levels of TFAs are also found in fat from ruminant animal products, such as meat and dairy foods. However, industrially produced TFAs and ruminant sources are not chemically identical.

High TFA intake poses a significant cardiovascular disease risk, more so than a high intake of dietary saturated fatty acids, owing to the effects of TFA in increasing low-density lipoprotein cholesterol levels and reducing high-density lipoprotein cholesterol levels.<sup>1</sup> On the basis of the adverse health effects of TFAs, Denmark introduced mandatory food composition restrictions in 2003 — the *trans* fat cut-off levels are  $\leq 2\%$  for fats and oils and  $\leq 5\%$  of the total fat for other foods.<sup>2</sup>

Three recent studies conducted in Australia and New Zealand have shown that TFAs are found in foods commonly available in supermarkets. In 2007, CSIRO (Commonwealth Scientific and Industrial Research Organisation) researchers used gas chromatography to determine the TFA content of 103 foods from supermarkets and fast-food outlets.<sup>3</sup> Most of the foods tested — such as fries, chips and bakery products — had low levels of *trans* fats (ranging from 0.1 g/100 g product to 0.7 g/100 g product), but nine contained levels exceeding the Danish limits.

Also in 2007, Deakin University researchers reported on the *trans* fat levels in 92 foods available in Australia, including bakery products, fast foods, frozen foods, packaged snacks and spreads. All products, analysed by attenuated total reflectance Fourier transform infrared spectroscopy, contained more than 5% total fat; some were foods of Australian origin and some were imported.<sup>4</sup> Twenty-one of the foods contained *trans* fat levels exceeding the Danish limits. The products with the highest amounts of *trans* fats, as a percentage of total fat, were microwave popcorn (30% TFA of total fat for all three

brands tested), followed by doughnuts (29% for two out of three brands tested), one brand of sesame seed water crackers (23%), one brand of chocolate wafer biscuits (22%) and most brands of savoury pastries (12%–20%).

A Food Standards Australia New Zealand (FSANZ) study conducted during 2008 and 2009 tested the levels of *trans* fat (using gas chromatography) in 456 Australian and New Zealand takeaway foods, fats and oils, snack foods, meat products and bakery products.<sup>5</sup> Sixty of the samples had *trans* fat levels greater than the Danish limits. One brand of popcorn had the highest *trans* fat level — 35% of total fat. A breakfast bar, another popcorn sample and one sample of potato crisps had *trans* fat levels of 31%, 28% and 22% of total fat, respectively. Of 42 samples that had been tested in a 2007 study, 26 had lower TFA levels in 2008–2009.

In a 2009 dietary intake assessment conducted by FSANZ (which used dietary modelling techniques), intake of industrially produced *trans* fat by the Australian and New Zealand populations was estimated to have declined by about 25%–45% when compared with values estimated using pre-2007 data.<sup>6</sup> In 2009, the mean *trans* fat intake was estimated to be 0.5–0.6 g/day of total energy intake, with more than 90% of Australians and more than 85% of New Zealanders estimated to have a *trans* fat intake of less than 1% of total energy intake, which meets the World Health Organization population goal.<sup>7</sup> However, despite the fact that average consumption has fallen, this fails to address the problems for those whose intake is not “average”. Without mandatory labelling, individuals are unable to avoid foods with high levels of industrially produced *trans* fat. Also, products imported into Australia could contain high amounts of *trans* fat if they are from the countries where there are no mandatory *trans* fat regulations.

Voluntary and mandatory TFA labelling regulations have been in force in many countries since 2003, including the United States, Canada, the Netherlands and Mercosur countries (Argentina, Brazil, Paraguay and Uruguay).<sup>8</sup> In contrast, it is not mandatory to declare *trans* fat content on the labels of Australian or imported foods that are sold in Australia and New Zealand. However, if the manufacturer

makes a nutrition claim about cholesterol or saturated, polyunsaturated, monounsaturated, omega-3, omega-6 or omega-9 fatty acids, *trans* fat content must be declared on food labels in Australia and New Zealand.

There is a strong need for mandatory labelling for *trans* fats in all packaged foods in Australia and New Zealand to make consumers aware of *trans* fat content of foods they purchase. This is especially important because recent studies have revealed significant levels of *trans* fats in a wide range of foods available in Australia and New Zealand.

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