



STAFF REPORT ACTION REQUIRED

Artificial Trans Fat: The Need for Federal Regulation

Date:	March 7, 2016
To:	Board of Health
From:	Medical Officer of Health
Wards:	All
Reference Number:	

SUMMARY

Research has shown that artificial trans fat consumption is associated with an increased risk of cardiovascular disease and other chronic conditions such as Alzheimer's disease, diabetes and some cancers^{1,2}. A voluntary approach to limiting artificial trans fats in the food supply implemented by the federal government in 2007 has shown improvement. However, many food products still contain trans fat at levels higher than voluntary targets^{3,4}.

Since 2007, the Toronto Board of Health (BOH) has advocated for national regulation of trans fat in the food supply to better protect Canadians. This report recommends the federal government develop and implement national regulation to eliminate artificial trans fat from the Canadian food supply. This aligns with recommendations from: the World Health Organization (WHO)⁵; Heart and Stroke Foundation of Canada (HSF)⁶; Dietitians of Canada (DC)⁷; Canadian Centre for Science in the Public Interest (CSPI)⁸; the United States Food and Drug Administration (US FDA)⁹; and most recently the Standing Senate Committee on Social Affairs, Science and Technology's report on Obesity in Canada¹⁰.

RECOMMENDATIONS

The Medical Officer of Health recommends that:

1. The Board of Health request the Federal Minister of Health to develop and implement national regulation to eliminate artificial trans fat from the Canadian food supply.

2. The Board of Health send a copy of this report to: the Ontario Minister of Health and Long-term Care; Public Health Ontario; Association of Local Public Health Agencies; the Canadian Cardiovascular Society; the Canadian Restaurant and Food Association; the Centre for Science in the Public Interest; Dietitians of Canada; Heart and Stroke Foundation of Canada; the Ontario Public Health Association, and the Ontario Society for Nutrition Professionals in Public health urging them to also advocate to the Federal Minister of Health for national regulation of the use of partially hydrogenated oils.

Financial Impact

There are no direct financial implications arising from this report.

DECISION HISTORY

In March of 2007, the BOH received a report recommending the Board urge the federal government to regulate artificial trans fat in the Canadian food supply by implementing the recommendations of the federal Trans Fat Task Force.

<http://www.toronto.ca/legdocs/mmis/2007/hl/bgrd/backgroundfile-2756.pdf>

The BOH received a report in September 2007 on the federal government's announcement to adopt the recommendations of the Trans Fat Task Force (TFTF) including a voluntary approach to reducing trans fat.

<http://www.toronto.ca/legdocs/mmis/2007/hl/bgrd/backgroundfile-6599.pdf>

In 2009, the BOH received a report outlining the interim results of Health Canada's Trans Fat Monitoring Program (TFMP) and requested TPH to determine the extent to which artificial trans fat-containing food products were still available in Toronto grocery stores and food service establishments.

<http://www.toronto.ca/legdocs/mmis/2009/hl/bgrd/backgroundfile-18201.pdf>

In 2011, the BOH endorsed recommendations to urge the federal government to enact regulation of the TFTF guidelines, and to continue monitoring artificial trans fat in the food supply.

<http://www.toronto.ca/legdocs/mmis/2011/hl/bgrd/backgroundfile-39470.pdf>

ISSUE BACKGROUND

Artificial or industrially produced trans fats are a chemical side effect of adding hydrogen molecules to unsaturated vegetable oils to create partially hydrogenated vegetable oils. This causes the oils to be more stable, extends shelf life, allows liquid oils to become solid at room temperature and is a cheaper alternative to animal and other vegetable fats. Partially hydrogenated vegetable oils have been in wide use in Canada since the 1970s and are the primary source of artificial trans fat. Artificial trans fats are commonly found in margarines and baked goods like cookies, crackers, pastries and deep-fried foods. Artificial trans fats are different from naturally occurring trans fats that are found in low

levels in meat and dairy foods. Currently, there are no indications that natural trans fats should be avoided.

Research has consistently indicated that artificial trans fats affect chronic diseases including diabetes and cancer, and increase the risk of coronary heart disease even when consumed at relatively low amounts^{1,2,11}. The main source of artificial trans fat in the food supply is partially hydrogenated vegetable oils, and some recommendations for addressing trans fats have focused on these oils.

In 2009, WHO concluded that the removal of partially hydrogenated vegetable oils would result in important health benefits and deemed the evidence sufficient to recommend that they be significantly reduced or virtually eliminated in the food supply¹⁰. A 2016 study from Denmark¹², the first country to regulate the use of artificial trans fat in their food supply in 2003, showed a significant decrease in heart disease mortality and the reduction in artificial trans fat consumption as contributing to the change.

The US FDA estimates that federal regulation to virtually eliminate partially hydrogenated oils could prevent 20,000 heart attacks and 7,000 deaths annually⁹. Previously, Health Canada estimated that 3,000 heart attack deaths could be prevented and up to \$450 million saved annually in health-care costs and workforce productivity losses if increased restrictions on trans fat were implemented in Canada¹³. An earlier Canadian economic study estimated that nearly \$7 billion in additional heart disease benefits would be realized under national regulation of trans fats¹⁴.

Since 2007, the Toronto BOH has advocated for national regulation of trans fat in the food supply to better protect Canadians. At the time, these recommendations advised the federal government to follow the requirements determined by the Trans Fat Task Force (TFTF), and implement a regulatory approach that placed a trans fat limit of 2% of total fat content for oils and margarines and 5% of total fat content for other food products¹⁵. Other strategies and targets have since been implemented globally, including federal regulation. Recently, the US FDA and the WHO have called for the virtual elimination of partially hydrogenated oils (PHO) from the food supply, as they are the primary source of artificial trans fat⁹.

COMMENTS

Regulation

In 2012, the WHO conducted a systematic review exploring effective policy interventions designed to reduce trans fat consumption¹⁶. The policy interventions included: national trans fat ban; local trans fat ban; mandatory labelling with voluntary limits; mandatory labelling and voluntary self-regulation. Those with national bans saw close to 100% of all food products being classified as trans fat free, with local bans varying between 92-99% for fried and restaurant food and 59% for all other fast foods. Those with voluntary limits, mandatory labelling and self regulation also showed progress but had varying success rates depending on the food category analyzed. This has led the WHO to

conclude that regulatory approaches should be used to provide the most protection from trans fat consumption.

Many countries around the world have enacted trans fat policies with multiple countries implementing national regulation to virtually eliminate artificial trans fats from the food supply while others have taken the approach to limit all (total) trans fat in the food supply^{16,17,18}.

Denmark was the first country to impose strict limits on artificial trans fat allowed in food products. Danish guidelines limited the use of artificial trans fat to 2% of total fat for oils and fat used in a food product. This approach has shown a decreased intake of trans fat in all age groups by approximately 90%. It was noted that most food companies were able to fully comply within one year. While other public health interventions occurred during this time, it is thought that the trans fat legislation contributed to the significant decrease in cardio vascular disease events^{12,16}.

As Denmark developed the original regulation with successful results, many countries have adopted trans fat legislation with the same or similar guidelines. This includes Austria, Switzerland, South Africa, Iceland, Sweden and Norway^{17,18,19,20}. Other countries such as the United States and Taiwan, have recently adopted trans fat legislation that will ban the use of partially hydrogenated oils from the food supply^{9,21}. This was done in the United States by making an official determination that partially hydrogenated oils were no longer “generally recognized as safe” (GRAS) for human consumption and mandated that food manufacturers remove them from the food supply within three years^{9,18}. Legislation under the US Federal Food, Drug and Cosmetic Act requires that a food additive can be used as long as it is generally recognized among experts as being safe under the conditions of its intended use, or “generally recognized as safe” (GRAS). Canada does not have a similar GRAS system in place.

Canadian Context

In early 2005, Health Canada and the Heart and Stroke Foundation of Canada co-chaired a multi-stakeholder task force to develop recommendations and strategies to eliminate or reduce processed trans fat in the Canadian food supply. The recommendations made by the Trans Fat Task Force (TFTF) in their 2006 report called for a regulatory approach to limit all trans fat to 2% of total fat content for oils and margarines and 5% total fat content for other food products²³.

In 2007, the federal government first chose a voluntary approach to implement the guidelines that focused on a monitoring program and educating consumers about trans fats on the Nutrition Facts Table. The government gave the food industry until 2009 to meet targets or regulatory action would be taken. The federal government began the Trans Fat Monitoring Program (TFMP)²⁴ during this period, which examined trans fat content of foods from grocery stores, small and medium-sized family and quick service restaurants, and cafeterias found in institutions. The TFMP was discontinued and the voluntary program has remained unmonitored since 2009. In 2012, the Federal Minister

of Health confirmed that the federal government would continue with a voluntary approach to artificial trans fat instead of imposing regulation on the food industry.

While product and consumer data collected during the TFMP indicate that this approach significantly reduced trans fat consumption and trans fat availability in food products, a 2010 TPH spot-check³ and a 2014 University of Toronto study⁴ indicated trans fat levels were still above the targets set by the TFTF; most notably in frozen pizzas, ready-to-bake dough, dairy-free cheeses, cake mixes and frosting, lard and shortening, coffee whiteners, and various bakery products. Recently, some of these products have also been found to have increased levels of artificial trans fat. This is significant as it increases the public's exposure to artificial trans fats and associated risk factors and it may disproportionately affect families living with low income as these foods are often more affordable. There is also some concern that while other jurisdictions have or will be implementing federal regulation with strict limits, Canada will experience an influx of imported products that do not meet the trans fat limits imposed elsewhere.

In late 2015 the mandate letter for the federal Minister of Health included developing regulations to eliminate trans fat in the Canadian food supply.

In early 2016, several Montreal-area councils adopted a motion supporting federal regulations to eliminate artificial trans fat in the Canadian food supply.

The voluntary approach has not reduced trans fat to an appropriate level in Canada to minimize health risks. As artificial trans fats have been found to increase chronic disease risk even when consumed in small amounts, it is recommended that the Board of Health support the recommendation requesting the Federal Health Minister to regulate the removal of artificial trans fat from the Canadian food supply.

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SIGNATURE

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REFERENCES

1. Teegala SM, Willett WC, Mozaffarian D. 2009. Consumption and health effects of trans fatty acids: a review. *J AOAC Int.* 92, 1250-7.
2. Mozaffarian D, Katan MB, Ascherio A, Stampfer MJ, Willett WC. 2006. Trans fatty acids and cardiovascular disease. *N Engl J Med.* 254, 1601-13.
3. Toronto Public Health. 2011. Reducing artificial trans fat in Toronto: need for action. Report to the Board of Health June 30 2011.
<http://www.toronto.ca/legdocs/mmis/2011/hl/bgrd/backgroundfile-39470.pdf>
4. Arcand J, Scourboutakos MJ, Au JTC, L'Abbe MR. 2014. Trans fatty acids in the Canadian food supply: an updated analysis. *Am J Clin Nutr.* 100(4), 1116-1123.
5. Uauy R, Aro A, Clarke R, Ghafoorunissa R, L'Abbe M, Mozaffarian D, Skeaff M, Stender S, Tavella M. 2009. WHO Scientific update on trans fatty acids: summary and conclusions. *European Journal of Clinical Nutrition* 63, S68-75.
6. Heart and Stroke Foundation of Canada. 2011. Trans fatty acids position statement.
http://www.heartandstroke.com/site/c.ikIQLcMWJtE/b.3799313/k.C112/Position_Statements_Trans_fatty_acids_position_statement.htm
7. Dietitians of Canada. 2015. Trans fat position. <http://www.dietitians.ca/Dietitians-Views/Food-Regulation-and-Labeling/Trans-Fats.aspx>
8. Centre for Science in the Public Interest. Trans fat policy.
<http://www.cspinet.org/transfat/index.html>
9. United States Food and Drug Administration. 2013. FDA takes step to further reduce trans fats in processed foods. Media Release.
<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm373939.htm>
10. [Standing Senate Committee on Social Affairs, Science and Technology. 2016. Obesity in Canada: A whole-of-society approach for a healthier Canada. http://www.parl.gc.ca/content/sen/committee/421/SOCI/Reports/2016-02-25_Revised_report_Obesity_in_Canada_e.pdf](#)
11. Mozaffarian D, Aro A, Willett WC. 2009. Health effects of trans-fatty acids: experimental and observational evidence. *European Journal of Clinical Nutrition* 63, S5-21
12. Restrepo BJ, Rieger MR. 2016. Denmark's policy on artificial trans fat and cardiovascular disease. *Am J Prev Med.* 50(1). 69-76.
13. Letter to the Honourable Rona Ambrose, Federal Health Minister. From Bill Jeffery, Canadian Centre for Science in the Public Interest dated November 7, 2013.
<http://cspinet.org/canada/pdf/cspi.letter.minister-ambrose.trans-fat.pdf>

14. Gray R, Stavroula M, Perlich K. 2006. Economic impacts of proposed limits on trans fat in Canada. *Current Agriculture, Food and Resource Issues* 7, 149-161.
15. Trans Fat Task Force. 2006. TRANSforming the food supply. Final Report. http://www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/nutrition/tf-gt_rep-rap-eng.pdf
16. Downs SM, Thow AM, Leeder SR. 2012. The effectiveness of policies for reducing dietary trans fat: a systematic review of the evidence. *Bull World Health Organ.* 91. 262-269H
17. Consumer Affairs Agency, Government of Japan. 2010. Regulatory trends of nutrition labelling and trans fatty acid labelling. <http://www.caa.go.jp/foods/pdf/syokuhin424.pdf>
18. L'Abbe MR, Stender S, Skeaff C M, Ghafoorunissa, Tavella M. 2009. Approaches to removing trans fats from the food supply in industrialized and developing countries. *European Journal of Clinical Nutrition* 63, S50-67
19. Health Department Republic of South Africa. 2011. Regulations relating to trans fats in foodstuffs. http://www.gov.za/sites/www.gov.za/files/34029_reg9427_gon127.pdf
20. European Commission. 2015. Report from the Commission to the European Parliament and the Council regarding trans fat in foods and the overall diet of the Union population. http://ec.europa.eu/food/safety/docs/fs_labelling-nutrition_trans-fats-report_en.pdf
21. Taiwan Food and Drug Administration. FDA cuts artificial trans fat in processed food. *Taiwan Today*. <http://taiwantoday.tw/ct.asp?xItem=234707&ctNode=2183>
22. United States Food and Drug Administration. 2015. Generally Recognized as Safe. <http://www.fda.gov/Food/IngredientsPackagingLabeling/GRAS/>
23. Trans Fat Task Force. 2006. TRANSforming the food supply: Final Report. http://www.hc-sc-gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/nutrition/tf-gt_rep-rap-eng.pdf
24. Health Canada. 2009. Trans Fat Monitoring Program. http://www.hc-sc.gc.ca/fn-an/nutrition/gras-trans-fats/tfa-age_tc-tm-eng.php