



TRANSforming the Food Supply

**Report of the Trans Fat Task Force
Submitted to the Minister of Health
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Executive Summary

This document represents the final report of the Trans Fat Task Force to the federal Minister of Health. The Task Force was formed in early 2005, following passage of an opposition motion in the House of Commons in November 2004. The motion called on Health Canada and the Heart and Stroke Foundation of Canada to co-chair a multi-stakeholder task force with a mandate to develop recommendations and strategies “to effectively eliminate or reduce processed¹ trans fats in Canadian foods to the lowest level possible.”

What Are Trans Fats?

Industrially produced trans fats are formed during partial hydrogenation, a process used by the food industry to harden and stabilize liquid vegetable oils. Among other advantages, this process maintains the taste and smell characteristics of oils enabling a longer shelf life for final food products.

The majority of the trans fats in our diet are industrially produced and are typically found in foods made with partially hydrogenated oil, primarily baked and fried foods. The trans fat content of some of these foods may be as high as 45% of the total fat in the product.

Trans fats also occur naturally. They are found at low levels (generally 2–5% of fat content) in ruminant-based foods such as dairy products and beef, although the level in lamb may be as high as 8%.

Health Concerns and International Response

There is a significant and growing body of evidence linking trans fats to coronary heart disease indicating trans fats may do even more harm than saturated fats. Metabolic studies, for instance, show that trans fats increase blood levels of LDL (“bad”) cholesterol and decrease blood levels of HDL (“good”) cholesterol. Both effects are strongly associated with increased coronary heart disease. Saturated fats are thought to be less damaging because they elevate both the “bad” and “good” types of cholesterol. Epidemiological data also point to a greater risk of coronary heart disease from increases in dietary trans fats than from increases in dietary saturated fats.

In 2002, the Panel on Macronutrients of the U.S. National Academies of Science, Institute of Medicine, recommended that trans fat consumption be as low as possible while ensuring a nutritionally adequate diet. The Panel did not set a safe upper limit because the evidence suggests that any rise in trans fat intake increases coronary heart disease risk. Subsequently, in 2003, the World Health Organization recommended that trans fat intake be limited to less than 1% of overall energy intake – a limit regarded by that body as a practical level of intake consistent with public health goals.

¹ The terms “processed trans fats” and “industrially produced trans fats” are used interchangeably in the report. The former term was used in the Parliamentary motion, but most experts and Task Force members preferred the latter.

Governments have started to take notice. In 2003, Denmark became the first country to set an upper limit on the percentage of industrially produced trans fat in foods, limiting trans fats from sources other than meats and dairy products to a maximum of 2% of total fat in each food item. In 2005, Canada became the first country to regulate the mandatory labelling of trans fats on prepackaged foods. And, in 2006, the United States introduced the mandatory declaration of trans fats in foods containing 0.5 grams or more per serving.

Situation in Canada

In Canada, scientists raised concerns about the detrimental effects of trans fats and the levels in the Canadian diet as far back as 1990. However, the use of partially hydrogenated oils continued to increase. By the mid-1990s, researchers estimated that Canadians had one of the highest intakes of trans fats in the world.

Today, the situation is much improved. Mandatory nutrition labelling and heightened consumer awareness have prompted food manufacturers to reduce or eliminate trans fats from many processed foods sold in grocery stores. For example, almost all bread products and salad dressings are now free of trans fats. Significant progress has also been achieved in certain food categories such as french fries and snack foods.

Despite the good news, however, many other foods – including some varieties of baked goods, oriental noodles, snack puddings, liquid coffee whiteners, microwave popcorn, toaster pastries, hard margarines and shortenings – still contain high amounts of trans fats. There is also evidence that consumer awareness and labelling alone will not result in reformulation of all processed foods with higher trans fat content as this change may present additional challenges and costs to some manufacturers.

Voluntary guidelines for providing nutrition information to consumers have recently been developed by the restaurant and food service sector. However, it is difficult to gauge the impact of this voluntary action on trans fat intake.

Task Force Approach

To ensure that its recommendations would be based on the best available evidence, the Task Force collected information from a variety of sources. Studies commissioned by Agriculture and Agri-Food Canada, a review of available alternatives to partially hydrogenated fats and oils by the Expert Committee on Fats, Oils and Other Lipids, a targeted scan of processed foods sold in grocery stores and a public consultation with the food industry enabled the Task Force to assess the feasibility of reducing the use of processed trans fats. The Task Force also commissioned a comprehensive scientific literature review and sought advice from internationally recognized experts on the health implications of substituting other fatty acids for trans fats.

The work of the Task Force was also informed by a modelling initiative undertaken by Health Canada to demonstrate the effect of limiting the trans fat content of foods on the total dietary intake of trans fats, as well as by expert opinion on the outcomes of the Danish and Canadian regulatory approaches to date.

The Choice of a Regulated Approach

Taking all the evidence into consideration, the Task Force agreed to a regulatory approach to effectively eliminate trans fat in all processed foods or reduce it to the lowest possible level. Factors influencing the decision included:

- The need to target the full range of food products;
- The Danish experience with regulation;
- The lessons learned from nutrition labelling and other related initiatives;
- The need to send a consistent and strong signal to seed growers and oil producers to invest in healthier alternatives; and
- The fact that benefits would accrue even to people who do not read labels, including vulnerable groups with lower incomes and/or lower literacy skills, who have a higher risk of coronary heart disease.

Designing the Regulations

Once the decision to recommend a regulatory approach had been taken, the Task Force considered a number of factors in setting the appropriate regulatory limits for Canada including:

- The evidence on the health effects of trans fats and the fact that trans fats have no intrinsic health value above their caloric value;
- Current dietary recommendations regarding trans fats (including the World Health Organization's recommendation that trans fat intake of daily diets should be 1% of energy intake or less);
- The unavoidable presence of trans fats in typical diets (including naturally occurring and industrially produced);
- Comments from a Danish scientific expert that similar overall health benefits would have been achieved in Denmark if the legislated level of trans fat had been slightly higher; and
- The desire to find a level that would permit the use of a range of healthier alternatives.

The Task Force also took into account two of its working principles – feasibility and sustainability – as well as the desire to simplify compliance and enforcement.

Recommendations

Given the dietary patterns of Canadians, including the amount of food consumed outside the home, the Task Force felt that it was important to find a solution that would encompass both manufactured foods and foods prepared in retail and food service establishments (e.g. in restaurants, food service operations and some grocery store bakeries and outlets). For practical reasons, however, the Task Force decided to limit the trans fat content of manufactured foods on a *finished product* or *output* basis and the content of foods prepared on site in retail and food service establishments on an *ingredient or input* basis.

The recommended regulations apply equally to all foods, domestic or imported, as per other Food and Drug Regulations. They do not apply to ingredients sold to food manufacturers as, in this case, limits would be set on a *finished product* or *output* basis.

The Task Force recommends that:

Foods purchased by retailers or food service establishments from a manufacturer for direct sale to consumers be regulated on a finished product or *output* basis and foods prepared on site by retailers or food service establishments be regulated on an ingredient or *input* basis.

In setting the recommended limits, the Task Force decided to explore a dual approach: a lower limit for vegetable oils and soft, spreadable tub-type margarines and a higher limit for all other foods containing industrially produced trans fats.

Setting a limit for “all other foods” was the more challenging task. This is because some foods contain both naturally occurring and industrially produced trans fats and there is no officially accepted analytical method for determining the amounts of each type of trans fat. Ultimately, the Task Force decided to set a limit that would be low enough to ensure a significant reduction in industrially produced trans fat and also have a limited impact on amounts of naturally occurring trans fats.

The recommendations thus focus primarily on the elimination of industrially produced trans fats but are expressed as limits on the total amount of trans fats in foods. An advantage of this approach is that it is consistent with that used for the Canadian nutrition labelling regulations, which apply to both industrially produced and naturally occurring trans fats.

The Task Force recommends that:

For all vegetable oils and soft, spreadable (tub-type) margarines sold to consumers or for use as an ingredient in the preparation of foods on site by retailers or food service establishments, the total trans fat content be limited by regulation to 2% of total fat content.

For all other foods purchased by a retail or food service establishment for sale to consumers or for use as an ingredient in the preparation of foods on site, the total trans fat content be limited by regulation to 5% of total fat content. This limit does not apply to food products for which the fat originates exclusively from ruminant meat or dairy products.

The modelling carried out for the Task Force indicates that, with an upper limit of 5% on the trans fat content of all foods that are significant sources of industrially produced trans fats, the average trans fat intake of Canadians should decrease by at least 55%. In addition, most of the industrially produced trans fats would be removed from the Canadian diet, and about half of the remaining trans fat intake would be of naturally

occurring trans fats. At this level, the average daily intake of trans fats for all age groups would represent less than 1% of energy intake, consistent with current dietary recommendations. A lower limit would not provide a significant additional decrease in average trans fat intake, but it would increase the effort and challenge for industry.

The Task Force felt the implementation of its recommendations should be staged to reflect the challenges to the food industry and to optimize public health benefits. For example, for certain oil uses (especially frying) adjustments can be made quickly. However, small businesses and certain baking applications may need more time to adjust.

The Task Force therefore recommends a “2 + 2” approach, allowing up to two years to develop regulations and up to two years for implementation such that:

Regulations be finalized by June 2008.

A basic phase-in period be set at one year from the date of entry into force of the final regulations.

Extended phase-in periods be specified for certain applications (e.g. baking) and for small and medium-sized firms, recognizing that in most cases the transition could be made within two years of the date of entry into force of the final regulations.

Size, complexity of the operation, number of products and availability of alternatives should be factored in when deciding timelines and any extensions. These can best be determined through the business impact test, which is a normal government procedure when regulations are drafted.

To maximize the health benefit to Canadians, the Task Force further recommends that:

The Government of Canada and all concerned food industry associations urge companies affected to use the most healthful oils for their food applications. (A list of more healthful alternatives for a variety of food applications can be found in appendix 14 of the report.)

The Task Force also recommends a number of incentives for industry and other key players to meet the following objectives:

- Facilitate the reformulation of food products with healthier trans fat alternatives;
- Help the food industry communicate the healthier nature of its products to consumers;
- Help small and medium-sized enterprises prepare for compliance; and
- Enhance the capacity of the Canadian agri-food industry to take a leadership role in this area.

Further, the Task Force recommends that the Government of Canada, in consultation and cooperation with public health experts and appropriate voluntary agencies, explore a number of measures to enhance public understanding of the new food labels, raise awareness of the health effects of the various types of fatty acids, ensure that fat consumption is properly understood in the context of a more healthful diet.

Finally, the Task Force recommends that, in order to expand the availability of evidence and fill identified research gaps, the Government of Canada encourage the relevant federal granting councils and/or federal departments to support research on trans fats in the areas of clinical nutrition, food and agriculture, and population and public health, beginning with the issues set out in this report. The Government should help ensure that the research results are transferred to relevant decision-makers.

Anticipated Impact

The proposed regulations, broad-based industry incentives and research will:

- Significantly improve the heart health of Canadians and save lives;
- Reduce the average daily intake of trans fats by Canadians of all age groups to less than 1% of energy intake, consistent with current dietary recommendations;
- Ensure that all Canadians, particularly those at the highest consumption levels, benefit from the virtual elimination of industrially produced trans fats;
- Provide an approach that is feasible and consistent with Canada's approach to nutrition labelling;
- Promote the development of alternative supplies of more healthful alternatives to trans fats; and
- Help level the playing field for all players in the food industry that must effectively eliminate industrially produced trans fats from their products.

1.0 Introduction

This document represents the final report of the Trans Fat Task Force to the federal Minister of Health. The Task Force was formed in early 2005, following passage of an opposition day motion, by a vote of 193 to 73, in the House of Commons in November 2004.¹ The motion, sponsored by the New Democratic Party, called on Health Canada and the Heart and Stroke Foundation of Canada to co-chair a multi-stakeholder task force whose mandate would be “to provide the Minister of Health with concrete recommendations and strategies to effectively eliminate or reduce processed trans fats in Canadian foods to the lowest level possible.” (See Appendix 1 for the Task Force Terms of Reference.)

The members of the Task Force were selected by its co-chairs based on nominations requested from a wide range of groups with a stake in the trans fat issue. The membership included individuals from the food manufacturing and food service sectors, the federal government, health non-governmental organizations, professional associations, academia, consumer groups, and oilseed producers and processors. (See Appendix 2 for a complete list of Task Force members.) Members were selected for their knowledge of subject areas relevant to the trans fat issue and were not expected to represent or defend their organizations’ positions regarding the proposed recommendations.

In presenting its recommendations, the Task Force was asked to provide:

- An overview of the health implications of identified trans fat alternatives through an assessment of the health benefits and risks of each alternative;
- An evaluation of the ability of alternatives to meet quality and consumer acceptability needs for various product applications;
- An evaluation of the implications of each alternative for the food supply chain (e.g. seed growers, oil processors/suppliers, distributors, manufacturers, retailers, restaurant and food service operators, and consumers);
- The appropriate minimum level of trans fat achievable in foods in Canada;
- An appropriate phase-in period, taking into account the time required to increase the supply of alternatives to meet demand and the time required to reformulate food products; and

¹ “Pursuant to Order made Thursday, November 18, 2004, the House proceeded to the taking of the deferred recorded division on the motion of Mr. Martin (Winnipeg Centre), seconded by Mr. Comartin (Windsor—Tecumseh), — That, in the opinion of this House, the federal government should acknowledge processed trans fatty acids are harmful fats, which are significantly more likely to cause heart disease than saturated fats; And that this House hasten the development of replacements to processed trans fats by urging the government to enact regulation, or if necessary legislation within one year, guided by the findings of a multi-stakeholder Task Force, including the Heart and Stroke Foundation of Canada and following the consultation process with scientists and the industry currently underway; Therefore, this House calls on the government to enact regulation, or if necessary present legislation that effectively eliminates processed trans fats, by limiting the processed trans fat content of any food product sold in Canada to the lowest level possible.” [Canada. Parliament. House of Commons. *Journals of the House of Commons*. 38th Parliament, 1st session, No. 30, November 23, 2004. (Available online: <http://www.parl.gc.ca/38/1/parlbus/chambus/house/journals/030_2004-11-23/030Votes-E.HTML>]

- An assessment of the trade implications of the proposed Canadian strategy on food imports and exports.

In May 2005, the Task Force co-chairs appeared before the House of Commons Standing Committee on Health to provide parliamentarians with an update on the Task Force's work. In the late summer of 2005, the Task Force provided an interim report to the Minister of Health, as per its terms of reference, that focused on public education, labelling, and possible immediate opportunities for the food service and food manufacturing industries to effectively eliminate trans fats.

2.0 Context

Industrially produced trans fats² – or trans fatty acids – are formed during partial hydrogenation, a process used by the food industry to impart hardness and stability to liquid vegetable oils such as soybean and canola oils. Among other advantages, this process maintains the taste and smell characteristics of oils, enabling a longer shelf life for the final food products.

The majority of the trans fats in our diet are industrially produced and typically found in foods made with partially hydrogenated oil. These foods are predominantly baked and fried goods such as crackers, cookies, doughnuts, pastries, muffins, croissants, french fries and breaded foods. The trans fat content of certain types of these foods may be as high as 45% of the total fat in the product, although levels of trans fat in other varieties of these foods have been reduced considerably in recent years due to the efforts of a number of companies. (See Appendix 3.)

Trans fats are also found at low levels (generally 2–5% of fat content) in ruminant-based foods such as dairy products and beef, and the level in lamb may be as high as 8%. These trans fats are from “natural sources,” that is, the trans fat from a ruminant animal (e.g. cow, sheep or goat) is produced by the normal action of bacteria in the animal’s intestinal tract.

There is a significant and growing body of evidence linking trans fats to coronary heart disease and indicating they may do even more harm than saturated fats. Metabolic studies, for instance, show that trans fats increase blood levels of LDL (“bad”) cholesterol and decrease blood levels of HDL (“good”) cholesterol. Both effects are strongly associated with increased coronary heart disease. Saturated fats are thought to be less damaging because they elevate both the “bad” and “good” types of cholesterol. Epidemiological data cited by the Danish Nutrition Council also point to a greater risk of coronary heart disease from increases in dietary trans fats than from increases in dietary saturated fats.³

In 2002, the Panel on Macronutrients of the U.S. National Academies’ Institute of Medicine recommended that trans fat consumption be as low as possible while ensuring a nutritionally adequate diet.⁴ The Panel members did not set a safe upper limit because the evidence suggests that any rise in trans fat intake increases coronary heart disease risk. They also acknowledged that trans fats are unavoidable in ordinary diets. Subsequently, in 2003, the World Health Organization advised that trans fat intake be limited to less

² The terms “processed trans fats” and “industrially produced trans fats” are used interchangeably in this report. The former term was used in the parliamentary motion, but most experts and Task Force members prefer the latter term.

³ S. Stender and J. Dyerberg, *The Influence of Trans Fatty Acids on Health* (Danish Nutrition Council, 4th ed., 2003).

⁴ Institute of Medicine, *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids* (Washington, D.C.: National Academies Press, 2002).

than 1% of overall energy intake – a limit regarded by that body as a practical level of intake consistent with public health goals.⁵

In Canada, scientists raised concerns about the detrimental effects of trans fats and their levels in the Canadian diet as far back as 1990, recommending that these levels not increase.⁶ The warnings led to the development of a number of margarine products with low trans fat levels, targeted to health-conscious consumers. However, while some progress was being made in the margarine sector, the use of partially hydrogenated oils continued to increase in other categories of processed foods. By the mid-1990s, using both dietary intake data and analysis of human tissue samples, researchers estimated that Canadians had one of the highest intakes of trans fats in the world.

In recognition of this increase and the impacts on the health of Canadians, Canada became the first country to regulate the mandatory labelling of trans fats on prepackaged foods.⁷ Canadian labelling regulations were promulgated on December 12, 2002, and became mandatory on December 12, 2005. (See Appendix 4.) For small companies (annual food sales of less than \$1 million), the requirement to implement the regulations was extended to 2007. As a result of the labelling legislation, as well as mounting consumer concerns about trans fats, many companies have been working to reduce trans fat levels in their products. However, more needs to be done if industrially produced trans fats are to be effectively eliminated from processed foods in Canada.

Other countries have also responded to the evidence linking trans fats and coronary heart disease. In January 2006, for example, the United States introduced the mandatory declaration of trans fats in foods containing levels of 0.5 grams or more per serving. Meanwhile, Denmark has adopted a very different approach. Rather than impose labelling requirements, Denmark became the first country to set an upper limit on the percentage of industrially produced trans fat in foods. In March 2003, acting on recommendations from the Danish Nutrition Council, the Danish Veterinary and Food Administration introduced an Executive Order limiting trans fats from sources other than meats and dairy products to a maximum of 2% of total fat in each food item, with a phased-in implementation from June 2003 to January 2004.

The Danish approach was based on the assumption that ending the use of industrially produced trans fats would have no negative impact on either health or the quality of food. The Danish Nutrition Council was also the first health authority to consider basing its recommendations on a possible difference between the health effects of naturally

⁵ World Health Organization (WHO), *Diet, Nutrition and the Prevention of Chronic Diseases*, WHO Technical Series Report 916 (Geneva, 2003). The WHO also recommended limiting intakes of saturated fats to less than 10% of daily energy intake, recognizing that not all saturated fats have similar metabolic effects.

⁶ Health and Welfare Canada, *Nutrition Recommendation – The Report of the Scientific Review Committee* (Ottawa, 1990).

⁷ The Nutrition Facts table on the label must declare the trans fat content of food along with the content of 12 other nutrients. In Canada, a declaration of “0 grams” of trans fat may be made on the label if the trans fat content is less than 0.2 grams per serving; the limit for mandatory declaration in the United States is 0.5 grams.

occurring and industrially produced trans fats – though it acknowledged that the assumption of any difference in health effects was based on very little data.

In Canada, the Danish experience led some groups to argue that a government-imposed ban would hasten the reduction of trans fats in the Canadian diet and affect a broader range of foods than nutrition labelling. This viewpoint, coupled with heightened awareness of the dangers of trans fats among the Canadian public – the proportion of Canadians reporting awareness surged from 45% in 1998 to 79% in 2005 (see Appendix 5) – formed a favourable background for political action and prompted the introduction of the trans fat motion in the House of Commons in November 2004.

3.0 Methodology

3.1 Principles and Criteria

Four key principles were developed by the Task Force as a framework for the development of its final recommendations:

- 1) There will be a significant net health benefit to Canadians through food consumption.⁸
- 2) Recommendations must be feasible and sustainable.
- 3) Recommendations will be based on the best available evidence and current state of knowledge, and built on learnings from previous experiences (e.g. with nutrition labelling).
- 4) Solutions will be multi-faceted, comprehensive, integrated and multi-sectoral.

In addition, several criteria were used to further refine the framework and assess the recommendations. (See Appendix 6.)

3.2 Literature Review

The Task Force commissioned a literature review from Dr. Bruce McDonald (Task Force secretary) to help inform the discussion among Task Force members and the scientific experts attending the public consultation held on November 2, 2005. The review documented the available scientific evidence on the health effects of trans fats and identified gaps and key issues to be raised during the consultation. (See Appendix 7 for an executive summary of the literature review and the full reference list.)

3.3 Task Force Meetings and Public Consultations

The Task Force held three full-day, face-to-face meetings (on April 1, June 14 and November 3, 2005) and five teleconferences (on March 9, October 13, November 21 and December 9, 2005, and May 2 to 4, 2006). In addition, members communicated via numerous email exchanges and secure website postings, and engaged in one-on-one telephone conversations with the Task Force co-chairs. (The work of the Task Force was limited during the January–February 2006 federal election period as per government policy.) Drafts of the final report were circulated for comments by members on January 20, March 3 and April 26. During the course of its work, the Task Force also held two public consultations, one with industry and another, as mentioned above, with scientific experts.

⁸ The Task Force spent some time debating the merits of adding the word “significant” to this principle, as it was defined differently by individual members. However, the intent is as follows: that any public policy change that brings with it market distortions and costs should not be undertaken unless the benefits are significant enough to warrant the change. There was a concern that if trans fats were simply replaced by saturates, the net health benefit, while positive, might not be all that significant given the negative health effects of saturates. The Task Force unanimously agreed that its work should seek to ensure that healthier alternatives to trans fats would minimize the replacement of trans fats by saturated fats.

3.3.1 Consultation with Industry

The objective of this consultation was to build a better understanding of industry issues and concerns pertaining to the reduction and effective elimination of industrially produced trans fats. Industry stakeholders were offered an opportunity to present their points of view in writing or at a public meeting held in Ottawa on June 13, 2005. An open invitation to the meeting was sent out to a variety of industry representatives, and 12 appeared in person before the Task Force.

Written feedback was invited through a questionnaire posted on Health Canada's website a few weeks before the meeting. The questionnaire outlined key information gaps identified by the Task Force in the early stages of its work and posed questions to industry to find out:

- What has it done to reduce trans fats?
- What problems is it facing?
- What are the potential implications of trans fat reduction?
- What are the current and future trans fat alternatives?
- What are the timelines for trans fat reduction and/or elimination in product lines?

Food manufacturers, retailers and oilseed producers and processors, as well as other industry representatives, provided feedback. (Appendix 8 provides the full questionnaire and a summary of the presentations.)

3.3.2 Consultation with Scientific Experts

On November 2, 2005, the Task Force held consultations in Ottawa to hear from internationally recognized scientists on the following issues:

- The health implications of alternatives to the use of partially hydrogenated oils; and
- The population health implications of potential policies for reducing the consumption of trans fats.

Eight experts from Canada and around the world appeared before the Task Force in person or via video conference. As well, a number of written submissions were received from experts who were unable to attend. The experts were provided with a copy of the literature review and a series of questions in advance to guide their presentations at the meeting. (See Appendix 9 for the questions.) The questions can be summarized as follows:

- What is the relative importance of various biomarkers as they relate to the impact of dietary fat on coronary heart disease risk?
- Would the replacement of partially hydrogenated oils by other types of fats have positive effects on coronary heart disease risk?
- To what extent should the impact of trans fat intake on non-cardiovascular chronic diseases influence recommendations on trans fats?
- Should the ratio of linoleic (omega-6) to alpha-linolenic (omega-3) acid be considered when proposing trans fat alternatives?

- Are there any instances where trans fats could be replaced by saturated fats?
- Should the fact that different saturates may have different effects on coronary heart disease risk influence recommendations regarding the replacement of trans fats by saturated fats?
- Would there still be an overall net health benefit to Canadians if partially hydrogenated oils were effectively eliminated from our food supply but were replaced, in some instances, with butter and tropical oils?
- How could the Task Force's recommendations meet the public health policy goals of reducing the risk of chronic disease, especially among the most disadvantaged subgroups of the population?

3.4 Interim Report

In its terms of reference, the Task Force was mandated to prepare an interim report that would focus on public education, labelling, and possible immediate opportunities for the food service and food manufacturing sectors to reduce trans fats. The interim report was completed in July 2005 and publicly released, along with the Government of Canada's accompanying official response, on August 31, 2005. (See Appendix 10.)

3.5 Situation in the Canadian Marketplace

In June 2005, Health Canada and Food & Consumer Products of Canada conducted a targeted scan of processed foods sold in Canadian grocery stores to gain a better understanding of changes in the use of partially hydrogenated oils in food products. Based on the ACNielsen food classification system, 20 food categories recognized as significant sources of trans fat (using Health Canada data⁹) were selected as potential categories where changes may be happening. Detailed laboratory analysis of the fatty acid composition was carried out for two of these food categories, margarines and granola bars, while label information on fat ingredients and fatty acid composition was collected for foods from the 18 other categories. The label information was used to identify low trans fat food products, which were then sampled and analyzed for further determination of their fatty acid composition. (See Appendix 3.)

3.6 Impact of Modifying the Trans Fat Content of Foods on Dietary Intakes

At the request of the Task Force, Health Canada evaluated the overall effect on the dietary intake of trans fat of restricting the trans fat content of foods according to various scenarios. (See Appendix 11.) Dietary intake data from nutrition surveys conducted in Ontario, Manitoba, British Columbia and Quebec in the late 1990s were used in constructing and evaluating the scenarios. However, baseline food composition values for trans fats were made as current as possible by integrating the latest Health Canada files for food composition. Despite some uncertainty in this modelling exercise, the Task Force is confident that it was based on the best data available and that the results are reasonably indicative of the potential impact of the Task Force's recommendations on the trans fat intake of Canadians.

⁹ Data compiled from federal and provincial nutrition surveys (1990 to 1999) with an update from the dynamic food composition survey database for trans fat.

3.7 Agriculture and Agri-Food Canada Studies

The results of two studies commissioned by Agriculture and Agri-Food Canada in 2005 were provided to the Task Force to contribute to its understanding of the issues:

- “Food Industry Perspective on Eliminating Trans Fats in Food Products”; and
- “Methods & Opportunities for Reducing or Eliminating Trans Fats in Foods.”

The results of these studies are summarized in Appendix 12.

3.8 Analysis of Alternative Oils and Fats

At the request of the Task Force, the Expert Committee on Fats, Oils and Other Lipids, a subcommittee of the Canadian Agri-Food Research Council, undertook a grid analysis of the different types of oils and fats that could be substituted for partially hydrogenated vegetable oils. The objective was to develop an overview of the physical and chemical properties of the various oils and fats, by food application. (See Appendix 13.)

The grid developed by the Expert Committee focused on availability and functionality. It predicted what fats and oils would likely be used by Canadian food manufacturers, retailers and food service operators in the next few years if the use of partially hydrogenated vegetable oils were eliminated or decreased to very low levels. The grid does not include high-stearate vegetable oil varieties as an alternative since they were not expected to be readily available in the next few years. The grid provides the projected fatty acid profiles of the various zero to low trans fat shortening and margarine alternatives that were identified for the application categories listed.

3.9 Table of Recommended Healthier Alternatives to Trans Fats

The grid developed by the Expert Committee enabled the Task Force to assess the health benefits and health risks of each alternative. Healthier alternatives identified for the various food applications and the criteria used to assess them are presented in the table entitled “Health Assessment of Existing and Potential Alternatives to the Use of Partially Hydrogenated Oils and Fats.” (See Appendix 14.)

4.0 Summary of Results

4.1 Evidence

4.1.1 Expert Opinion – Nutrition and Health

As indicated in section 3.2, the Task Force commissioned a literature review to help inform its consultation with scientists. The review enabled the Task Force to develop pertinent questions that were then provided to internationally recognized lipid experts for their consideration and recommendations. (The experts' responses, including references to the questions, are presented in Appendix 9.) Below is a summary of the key learnings.

Biomarkers

All of the consulted experts agreed that there is sufficient evidence to consider the total/HDL cholesterol ratio as the primary biomarker for assessing the effects of dietary fats on coronary heart disease. A marker of inflammation such as C-reactive protein might be a stronger biomarker; however, there is currently a lack of data on the effects of dietary fats on plasma levels of this biomarker.

Effect on serum cholesterol and lipoprotein levels of replacing partially hydrogenated oils with oils rich in monounsaturated fats

There was general consensus that replacing partially hydrogenated oils (containing both trans and saturated fats) with oils high in cis-monounsaturated fatty acids¹⁰ would have positive effects on lipoproteins and coronary heart disease risk. The reduction in risk would, however, depend on baseline trans and saturated fat intakes.

Polyunsaturated fatty acids, including alpha-linolenic (omega-3) and linoleic (omega-6) acids,¹¹ are also important components of a cholesterol-lowering and more healthful diet. However, the benefits depend to some degree on consuming an appropriate balance of these fatty acids. Comments from the Expert Committee on Fats, Oils and Other Lipids suggest that, while changes to the diet to reduce trans fats are not likely to alter current intakes of omega-3 polyunsaturated fatty acids, these changes may potentially increase the intake of omega-6 polyunsaturated fatty acids to undesirable levels. Thus the use of oils high in cis-monounsaturated fatty acids rather than omega-6 polyunsaturated fatty acids should be considered when choosing substitutes for trans and saturated fats in food products. The goal should be to replace, as much as possible, trans and

¹⁰ Cis-monounsaturated fatty acids are fatty acids that have one carbon-carbon double bond in the cis configuration. Oleic acid is the cis-monounsaturated fatty acid most commonly found in foods. Examples of high-oleic oils are canola and olive oils.

¹¹ Cis-polyunsaturated fatty acids are fatty acids that have two or more carbon-carbon double bonds in the cis configuration. The vast majority of polyunsaturated fat in the diet is linoleic acid, an omega-6 fatty acid that is especially abundant in soybean and sunflower oils. Oily fish represent the richest source of omega-3 fatty acids. Flax seed, canola and soybean oils also contain relatively high levels of omega-3 polyunsaturated fatty acids in the form of linolenic acid.

saturated fats with monounsaturated fats and maintain adequate intakes and a proper balance of omega-6 and omega-3 polyunsaturated fatty acids.

Comparison of trans fats and saturated fats on risk factors for coronary heart disease

There is evidence from both metabolic and epidemiological studies that saturated fats (at least those from dairy products and meat) increase the risk of coronary heart disease. However, there was general consensus among the experts that trans fat is a more important risk factor than saturated fat for coronary heart disease.

Some manufacturers have already succeeded in eliminating most of the trans fats without increasing saturated fats by using cis-monounsaturated fats in certain food categories. In Europe, the transition from partially hydrogenated frying oils to frying oils and margarines high in cis-monounsaturated fats and low in saturated and trans fats shows that replacing trans fats in fast food, spreads and cooking oils or fats is feasible.

The primary product category that may require the use of a hard fat is baked goods, although this does not apply to every food within this category. At present, the only viable alternative to partially hydrogenated fats in baked goods appears to be fats and oils containing a significant proportion of saturated fatty acids. However, the use of saturates in baked goods should not lead to an overall increase in saturated fat intake as the use of saturates plus trans fats in other categories has been decreasing.

Research from both prospective cohort studies and metabolic studies found that high intakes of trans fat (5.7–11% of energy intake) are more harmful to health than high intakes of saturated fat (14–20% of energy intake), whether the outcomes measured are coronary heart disease events themselves or cholesterol-related biomarkers of such risk. However, no research has been done to determine whether trans fats are more harmful than saturated fats at low levels of intake (1–3% of energy intake).

Relative effects of different types of saturated fats on coronary heart disease risk

Evidence to date on the relative effects of individual saturated fatty acids is sparse. The few randomized metabolic studies that do exist suggest that different saturated fats have varying effects on the total/HDL cholesterol ratio, depending on their individual effects on levels of LDL and HDL cholesterol. Lauric, myristic and palmitic acids, for example, appear to raise LDL cholesterol, while stearic acid either has no effect or slightly reduces LDL cholesterol. All four saturated fatty acids increase HDL cholesterol to different extents, which could be interpreted as counterbalancing their effects on LDL cholesterol. However, while low HDL levels have been linked to increased risk of coronary heart disease, it is not known whether increases in HDL, resulting from saturated fat consumption, have a protective effect.

There is currently no scientific agreement on the relative health effects of saturated fatty acids from plant sources, whether they are derived from natural fats or fully hydrogenated fats.¹² Data are also lacking on the relative effects of liquid oils interesterified¹³ with saturated fats or fats high in saturated fatty acids on the risk factors for coronary heart disease. Thus experts consider it prudent to ensure that substitutes for partially hydrogenated oil not lead to large increases in the intake of saturated fats, whether they are derived from natural fats or fully hydrogenated fats.

Net health benefit of replacing partially hydrogenated oils, in some instances, with solid dietary fats that are high in saturated fats

All the invited experts, including those providing written feedback, agreed that butter and other animal fats are not a good replacement for partially hydrogenated oils. Butter has been shown to have a greater adverse effect on the total/HDL cholesterol ratio than all the other solid dietary fats (e.g. palm oil, palm kernel oil and coconut oil) as well as margarines and shortenings with low to moderate levels of trans fats.

4.1.2 Key Health Learnings

- Metabolic and epidemiologic studies consistently show that trans fats are more harmful than any other type of fat.
- Metabolic studies have demonstrated that trans fats not only elevate LDL (“bad”) cholesterol but also decrease HDL (“good”) cholesterol.
- Replacing trans fats with saturated fats has some positive effect on health, but the benefits are greater when trans fats are replaced by cis-monounsaturates and cis-polyunsaturates.
- Both adequate intakes and a proper balance of omega-6 and omega-3 polyunsaturated fatty acids are needed to lower coronary heart disease risk.

4.1.3 Social and Economic Determinants of Health

The Task Force also considered the government’s ability to affect population health in light of social and economic determinants of consumer behaviour. One expert used the results of a study on margarine consumption to demonstrate that product claims can push up prices, and that regulations governing nutrition labelling or product claims, for example, are not sufficient to significantly reduce the trans fat intake of all Canadians, particularly those in low socio-economic groups. This expert felt that more direct interventions by government are required.

¹² As mentioned previously, the manufacturing of some foods requires the use of hard fats high in saturated fatty acids. These hard fats can be obtained synthetically by the full hydrogenation of liquid oils high in monounsaturated and polyunsaturated fatty acids into fats high in stearic acid with a trans fatty acid content between 1% and 2% of total fat.

¹³ Interesterification is a process used by oil processors to rearrange or redistribute fatty acids within and among fat (triacylglycerol) molecules. This process can be used as an alternative to partial hydrogenation to increase the hardness and stability of oil blends.

To maximize the population health impact of government intervention, this expert proposed the following two principles:

- Reductions in the trans fat content of particular classes of foods (e.g. margarine) should be applied across the board, that is, to generic, low-cost products as well as premium brands. Changes in product formulation that are restricted to higher-end products will not alter the health risks associated with trans fat consumption among more price-sensitive consumers (e.g. low-income households).
- Reductions in the trans fat content of energy-dense snack foods, baked goods and commercially fried foods should be accompanied by initiatives to shift consumption patterns toward healthier alternatives (e.g. fruits, vegetables and whole grains).

4.2 Situation in the Canadian Marketplace

4.2.1 Availability of Healthier Alternatives

In preparing its recommendations, the Task Force was mandated to provide:

- An overview of the health implications of identified trans fat alternatives through an assessment of the health benefits and risks of each alternative; and
- An evaluation of the ability of alternatives to meet quality and consumer acceptance needs for various product applications.

The Task Force selected four criteria to help identify healthier substitutes for partially hydrogenated vegetable oils (as defined in Appendix 14): health, availability, functionality and cost. Health and availability were “screen” criteria that had to be met by all of the alternatives being considered. More healthful alternatives were then identified for all broad application categories and grouped in the table in Appendix 14.

For frying oils, for example, the Task Force identified as healthier alternatives the new varieties of vegetable oils that are high in oleic acid or low in alpha-linolenic acid (omega-3). These oils offer greater stability under conditions such as repeated use for frying and heating to high temperatures.

For the harder fats used in margarines and shortenings, the Task Force favoured products prepared by the interesterification of highly saturated oils or fully hydrogenated oils with different proportions of non-hydrogenated liquid vegetable oils.

In this context, it is worth mentioning that, during its presentations to the Task Force on June 13, 2005, the food industry proposed reduced trans hydrogenation as one new approach to developing low trans fat alternatives. This oil process, which is not yet fully developed, may hold some promise, and the resulting oil could be considered a healthier alternative in the future once Health Canada has assessed its safety.

The Task Force recognized that, while the switch to healthier oils may be straightforward for some applications, it may be challenging for certain other applications and may necessitate some investment in research and development. Areas for further research include the use of high-oleic and low-linolenic (omega-3) oils, the blending of less stable oils with more stable oils, and changes to the processing and packaging of foods.

In this assessment, the Task Force did not eliminate alternatives based on cost. However, it recognizes that, at least in these early stages of the transition, there may be significant costs associated with the use of less traditional alternatives if changes require modifying processing and packaging methods and buying new equipment.

The greatest challenges and costs are likely to arise when seeking the “perfect” alternative, that is, one that not only offers a better fatty acid profile but also matches the original product for taste, texture, appearance and shelf life. If the use of the healthier substitutes listed in Appendix 14 lessens consumer acceptance of the reformulated food, manufacturers may be tempted to choose some of the less healthful alternatives listed in Appendix 13.

Ensuring an appropriate phase-in period would give industry time to address challenges associated with the use of healthier alternatives and enable it to spread the cost of the transition over time.

4.2.2 Impact on Seed Growers and Oil Processors

According to preliminary studies commissioned by Agriculture and Agri-Food Canada and industry presentations made to the Task Force, reducing the dietary intake of trans fats could have a negative impact on Canadian production and processing of canola and soybean oils. This is because some of these oils are partially hydrogenated and thus contain trans fats. Removal of these oils from the market could decrease vegetable oil processing in Canada and potentially weaken oilseed production; however, the extent of any negative impact is not clear and could be offset by increased international demand for vegetable oil.¹⁴

On the positive side, major strides have been made in developing new oilseed varieties (e.g. high-oleic canola) with traits that enable the manufacture of vegetable oils that have greater oxidative stability and longer shelf life. For many applications, this increased degree of oxidative stability enables the use of such oils without the need for hydrogenation. Producers of these new varieties were optimistic regarding future Canadian production capacity and stressed the importance of strong and consistent market signals to keep this trend moving forward.

¹⁴ Ontario Soybean Growers, *Annual Report 2005* (2005); Canola Council of Canada, *Canadian Canola Industry: Market Statistics* (December 14, 2005).

4.2.3 Fat Composition of Foods Sold at Retail

A targeted national scan of processed foods sold primarily in grocery stores, conducted by Health Canada and Food & Consumer Products of Canada in June 2005, confirmed the Task Force's assumption that the use of alternatives to trans fats was increasing rapidly, although more so in some food categories than in others. Almost all bread products and salad dressings were free of trans fats. Significant progress had also been achieved in certain food categories such as french fries and chips. However, some varieties of baked goods, oriental noodles, snack puddings, liquid coffee whiteners, microwave popcorn, toaster pastries, hard margarines and shortenings still contained high amounts of trans fats. (See Appendix 3.) It was also noted that new and reformulated products with minimal amounts of trans fat were appearing on the market on a regular basis.

In many instances, partially hydrogenated oils had been replaced by oils rich in monounsaturated and polyunsaturated fatty acids – fats that have been identified as healthier alternatives to oils and fats rich in saturated fatty acids. However, alternatives rich in polyunsaturated fatty acids are more prone to lipid oxidation and do not possess the functional characteristics (e.g. an appropriate melting point) needed in processing certain food products. In fact, it was noted that in some food categories (e.g. cookies, snack puddings, crackers, granola bars, oriental noodles and liquid coffee whiteners), partially hydrogenated oils had sometimes been replaced by oils in which 50–100% of total fat was saturated fat.

While these high saturated fat alternatives are still less harmful to health than oils containing high amounts of trans fatty acids, they do not contribute to the goal of reducing coronary heart disease risk and achieving the Task Force's objective of "significant net health benefit." That said, even in some of the more problematic food categories (e.g. crackers and other snack foods), the Task Force noted innovative products that have incorporated more healthful alternative oils. This finding can be attributed to targeted research and development efforts by industry – efforts that should be encouraged.

The Task Force's consultations revealed some concerns regarding the use of trans fats in baby and toddler foods (i.e. foods for children under two years of age). It seems that increased awareness has already sparked actions by industry,¹⁵ and the Task Force did not devote time to discussing this issue.

In summary, there is good evidence that growing consumer awareness and mandatory nutrition labelling have motivated industry to reduce or eliminate trans fat from many processed foods sold in grocery stores. However, there is also

¹⁵ Children under two years of age need a high-fat diet with sufficient amounts of essential fatty acids for proper growth and development. To avoid unduly restricting fat intake because of concerns related to types of fat, Health Canada made it optional to list saturated fat, trans fat and cholesterol on baby and toddler food labels. Recent analysis of baby and toddler foods, including teething biscuits, by Health Canada has shown that the trans fat content of infant foods is minimal (less than 1% of total fat). Beef and lamb preparations and products containing dairy fat contain higher amounts, consistent with the levels that occur naturally in the meat and dairy ingredients.

evidence that these factors alone will not result in reformulation of all processed foods, and that some products with higher trans fat content are likely to remain unchanged in the absence of a regulated limit. These include products where it is more difficult for manufacturers to generate an adequate return on the investment required for reformulation. Examples of such products are low-cost foods (oriental noodles), foods consumed for reasons other than nutritional value (cakes and pastries) and foods for which nutrient information is not easily accessible (nachos sold in movie theatres).

4.2.4 Restaurant and Food Service Industry

The Task Force noted that data¹⁶ from federal and provincial surveys suggest that 22% of the average trans fat intake of Canadian adults (and as much as 31% in the case of males aged 19 to 30 years) is provided by foods consumed away from home, often in fast food restaurants and other food service environments. Accordingly, the Task Force felt it was important to address the question of trans fats found in foods in the restaurant and food service sector.

The challenge for the Task Force was to identify mechanisms that could encourage the move away from trans fats in this sector of the food industry. The Task Force considered regulated nutrition labelling and claims, which are useful in the prepackaged sector of the food industry but not as well suited to foods provided by restaurants and other food service operations. Labelling is difficult in this sector because the food is generally not packaged, menus and menu boards offer limited space for nutrition information, food is often customized to order, and preparation is not always standardized. For example, the trans fat content of a large serving of french fries can vary from 0.3 grams to 8 grams, depending on the outlet and the oil used for frying.

Nevertheless, voluntary guidelines for providing nutrition information to consumers have been recently developed by the Canadian Restaurant and Foodservices Association. More than 25 major restaurant chains, representing about 38% of all chain establishments, have committed to participating in the Association's Nutrition Information Program and to providing information on the nutrient content of their products through pamphlets, tray liners and websites. When fully implemented, this initiative will enable consumers who obtain the information to reduce their intake of trans fats.

The restaurant and food service sector has made some progress in reducing the trans fat content of its products. Certain restaurant chains have succeeded in removing trans fat from foods such as french fries, onion rings, chicken strips, battered fish, gravies and salad dressings. In Quebec, one restaurant chain of 25 outlets appears to have succeeded in eliminating industrially produced trans fat from all 216 of its menu items. With the support of its suppliers, and by developing new products in its central kitchen, this chain took nine months to

¹⁶ Data compiled by Health Canada from federal and provincial nutrition surveys (1990 to 1999), with an update from the dynamic food composition survey database for trans fat.

reformulate or eliminate the 48 items that contained industrially produced trans fat.

Despite the progress, however, it is difficult to get a sense of the extent and depth of these changes in the overall restaurant and food service sector.

4.3 The Danish Model

4.3.1 Description

The Danish government and Danish margarine producers have been world leaders in decreasing the level of industrially produced trans fats in foods. For example, as a result of the Danish Nutrition Council's 1994 report on the effects of trans fats on health, margarine producers agreed to voluntarily reduce the processed trans fat content of their products. In 2001, the Danish Nutrition Council concluded that this action had had a significant impact on Danish trans fat intake. However, there were still concerns about a subgroup in the population that continued to have a high intake of industrially produced trans fats from items such as french fries, microwave popcorn, chocolate bars and fast food.

In 2003, in response to recommendations from the Danish Nutrition Council, the Danish government prohibited the use in foods of oils containing more than 2% of industrially produced trans fat by 2004. Recent analyses of foods that have traditionally been significant sources of industrially produced trans fats clearly demonstrate that these trans fats have been virtually eliminated from foods in Denmark. As well, the analyses showed that international fast food chains, while continuing to sell foods with high levels of industrially produced trans fats in other countries, had reduced the amount of these trans fats in foods sold in Denmark.

4.3.2 Lessons Learned from the Danish Experience

A few salient points can be drawn from the Danish experience:

- According to Danish authorities, the regulations had no noticeable effect on the availability, price or quality (i.e. taste and shelf life) of foods previously containing high amounts of industrially produced trans fats.
- Trans fats were eliminated from margarines without increasing the amount of saturated fats and often with an increase in monounsaturated fats. (The same change has been observed in soft margarines sold in Canada.)
- Although concerns about trans fats had been voiced since 1994, and although margarine producers did take steps to reduce the industrially produced trans fat content of their products, it was only after regulations came into effect that processed trans fats were virtually eliminated from the Danish food supply.
- Multinational restaurant chains continued their operations in Denmark.
- In response to a question from the Task Force on November 2, 2005, Dr. Steen Stender of the University of Copenhagen agreed that the health benefit would probably have been just as significant if a higher limit on

industrially produced trans fat, such as 4–5%, had been specified – such a limit would have been equally effective in eliminating foods that are significant sources of industrially produced trans fats from the Danish diet. A higher limit would also have made it unnecessary to discriminate between naturally occurring and industrially produced trans fats in foods.

4.4 Impact of Modifying the Trans Fat Content of Foods on Dietary Intakes

From its deliberations and review of material, the Task Force concluded that the Danish approach – a 2% limit on the industrially produced trans fat content of oils or fats used in foods – would not be the most appropriate course for Canada. A higher limit, which included all sources of trans fat, would be more feasible to implement and could still yield a significant health benefit to the Canadian population.

Before making its final recommendation regarding a limit on the trans fat content of foods, the Task Force asked Health Canada to model the impact of a variety of potential recommendations and limits on trans fat in foods and the resultant intakes across the Canadian population, grouped by age and sex. (See Appendix 11.)

The first step was to estimate the current baseline intake of trans fat for the Canadian population, taking into consideration as much as possible the changes that had occurred in the trans fat content of processed foods since the dietary intake data were collected in the late 1990s. This modelling indicated that the baseline average daily consumption of trans fats for the Canadian population would range between 3 and 9 grams. This range reflects lower intakes than previously estimated (5 to 13 grams).¹⁷ However, it is consistent with the increased availability of “trans fat free” foods on the market during the last year.

Next, three scenarios were developed to assess the impact on dietary intake of limits on the trans fat content of foods. In all three scenarios, the trans fat content of all oils, breads and salad dressings sold at retail was set at a maximum of 2% of total fat, while the trans fat content of foods containing only naturally occurring trans fat was not limited. Where the scenarios differed was in the maximum allowed trans fat content of all other foods, which was set at 3%, 4% and 5% of total fat respectively.

If an upper limit of 5% on trans fats were applied to all foods that are significant sources of industrially produced trans fats, the average trans fat intake of Canadians would decrease by at least 55%. Most of the industrially produced trans fats would be removed from the Canadian diet, and about half of the remaining trans fat intake would be of naturally occurring trans fats. At this level, the average daily intake of trans fats for all age groups would represent less than 1% of energy intake, consistent with the recommendations of the World Health Organization.

If an upper limit of 4% were applied, the modelling indicates that the average trans fat intake would decrease by an additional 2–3%. In reality, much of this additional

¹⁷ W.H.N. Ratnayake and Z.Y. Chen, Chapter 3 in *Development and Processing of Vegetable Oils for Human Nutrition*, edited by R. Przybylski and B.E. McDonald (Champaign, IL: AOCS Press, 1995).

reduction would also happen with a 5% limit since most products, once reformulated, would contain smaller amounts than the regulated limit. (See Appendix 3.) A reduction of the upper limit to 3% would have even less of an impact.

The recommendations that the Task Force sets out in section 6.0 of this report are provided in the context of an overall, balanced diet as described in *Canada's Food Guide to Healthy Eating*.¹⁸ Consequently, throughout its deliberations, the Task Force has been concerned that consumption of saturated fats should not increase significantly as a result of limitations on trans fats.

There is no reason to believe that limiting trans fat intake would cause the intake of saturated fats to increase above the current combined intake of trans and saturated fats. The targeted scan of the food supply completed by Health Canada and Food & Consumer Products of Canada for the Task Force suggests an improvement in the fatty acid profile of key food categories such as margarines and snack foods, which should largely compensate for increased levels of saturated fats in a few food categories.

In each of the following food categories, analysis of foods demonstrated that partially hydrogenated fats had been replaced mostly by cis-mono- and cis-polyunsaturated fats: breads, margarines, shortening, breaded meats, granola bars, french fries, crackers, chips and nachos. These food categories represent a major portion of the foods identified as key sources of trans fats in the 1990s.

In some food categories such as cookies and oriental noodles, the amount of saturated fat was generally higher in the reformulated products; however, the amount was mostly lower than the combined amount of saturated and trans fats found in products that still contained partially hydrogenated fats.

A minority of “trans fat free” products had a saturated fat content above the combined trans and saturated fat content of similar products containing partially hydrogenated fats (e.g. a sandwich cookie, a liquid coffee whitener and a snack pudding). However, even then, it was sometimes possible to find other products in the same food category with a better fatty acid profile. Clearly, some manufacturers have been able to reformulate with healthier alternatives without increasing saturated fats. These data show that for a large number of food categories it is feasible to replace partially hydrogenated oils with healthier alternatives.

4.5 Trade Aspects of Regulating the Trans Fat Content of Foods

As part of its mandate, the Task Force was asked to assess the trade implications of its recommendations. Although this topic was raised in a number of discussions, the Task Force did not possess the expertise to explore it thoroughly. The issue was addressed primarily through advice from government officials responsible for international programs and international trade policy.

¹⁸ Health Canada, *Canada's Food Guide to Healthy Eating*, 1992 (currently being revised).

The Task Force was advised that mandating a limit on the trans fat content of foods would not conflict with Canada's international obligations under World Trade Organization agreements, in particular the Agreement on Technical Barriers to Trade. This is because Canada can claim that limiting the amount of trans fats in the Canadian diet is necessary to fulfill the legitimate objective of protecting human health. Canada's position is supported by internationally recognized scientific organizations such as the Institute of Medicine of the U.S. National Academies, the World Health Organization and the Danish Nutrition Council, which agree that the intake of trans fats should be as low as possible. Canada's position is also supported by the fact that other jurisdictions have adopted measures to limit the consumption of trans fats.

If the Task Force's recommendations for regulating the trans fat content of foods are implemented, it is expected that many companies will have to develop or reformulate their products for sale in Canada. However, it is clear that reducing dietary trans fat is a pressing issue in both Canada and the United States, as well as in many other countries. Products developed to meet the Canadian regulatory limits will be marketable in these other countries. The regulation may even give Canadian firms a marketing advantage.

Although the proposed regulation does not conflict with Canada's international trade obligations, it will clearly have some effect on trade. Thus it will be important for Canada to notify its key trading partners and members of the World Trade Organization and provide them with reasonable time to comment. Consideration of the comments received should allow for a comprehensive assessment of the trade implications of the Task Force's recommendations.

The federal government must also pursue discussions with Canada's main trading partner, the United States, to address existing and potential differences as recommended in the Task Force's interim report. (See Appendix 10.) For example, the U.S. approach has been to require the amount of trans fat in foods to be disclosed on the label, but it has placed no limits on trans fat content. Nevertheless, many companies selling in the American market have already reformulated their products to contain less than 0.5 grams of trans fat per serving. At this level they are not required to disclose the trans fat content, even if it is greater than 5% of the total fat content. If a regulatory maximum of 5% of total fat is established for the trans fat content of foods in Canada, companies would no longer be able to sell some of these recently reformulated products in Canada.

5.0 Discussion and Analysis

5.1 Voluntary Guidelines or Regulations?

The Task Force considered which approach to reducing the trans fat content of foods – voluntary guidelines or regulations – would be more effective in improving the health of all Canadians? In making its decision, the Task Force was influenced by the regulatory experience of Denmark, Canada’s experience with nutrition labelling regulations, advice received on the social determinants of population health, the members’ desire to target the full range of food products, and a request from the edible oil industry for a strong and consistent signal regarding the need for healthier alternatives.

The Danish experience showed that, despite the efforts of Danish margarine producers, it was only after regulations came into effect that processed trans fats were virtually eliminated from the food supply.

Canada has had a similar experience with labelling. Although voluntary nutrition labelling began in the late 1990s (supported by a variety of non-regulatory incentives), it was only after regulations came into effect that labels became universal and their content and look were standardized. The regulations transformed the former patchwork of content and styles into a public health tool that improved the ability of Canadians to make informed food choices.

With the introduction of mandatory nutrition labelling for prepackaged foods, voluntary programs encouraging more nutrition information in fast food restaurants, and the various food industry initiatives to reduce the level of trans fats in foods sold in Canada, it is now possible for health-conscious Canadians to choose a diet low in trans and saturated fats. However, lowering their dietary intake of these fats will continue to be a chore for Canadians unless information on trans fat content is readily available. For example, the targeted scan of processed foods sold at retail found that the nachos and dip sauces from a movie theatre had some of the highest levels of trans fats noted. (See Appendix 3.)

In addition, there are food products whose taste, cost and convenience are more important marketing features and determinants of consumer choice than their nutritional characteristics may be. For these products, nutrition labelling and a voluntary limit on fatty acid composition would likely have little impact, particularly if the change required some compromise on these selling characteristics.

Voluntary guidelines also provide little incentive to change the nutritional characteristics of a product if it cannot be claimed that the resulting food is healthier. Foods whose trans fat content has been reduced must also be low in saturated fat in order to carry a “trans fat

free” claim.¹⁹ For many pastries and some snack foods, “trans fat free” claims will not be permitted on reformulated products because the alternative to partially hydrogenated oil generally contains moderate to high amounts of saturated fats. These foods are unlikely to be reformulated unless regulations are promulgated.

Evidence presented to the Task Force concerning margarines also suggests that claims tend to be applied only to high-end products, which are less accessible to price-sensitive consumers. A regulated approach will affect all foods and thus benefit all consumers regardless of their socio-economic status.

All these considerations point away from voluntary compliance and toward regulations limiting the trans fat content of foods as being most effective at the population level. Benefits would accrue even to people who do not read labels, including those with lower incomes or lower literacy skills. As these groups are at a higher than average risk of coronary heart disease, this intervention would better support Canada’s national health objectives.

The regulatory approach would also provide a clear signal all along the food supply chain and reduce the uncertainty experienced by the food and edible oil industry. In addition, it would help create a more level playing field for all players.

5.2 Finished Products or Ingredients?

5.2.1 Manufactured Foods

The Task Force concluded that a limit on the trans fat content of the finished product or *output*, rather than its ingredients, would ensure a more level playing field for domestic and foreign manufacturers of processed foods.

5.2.2 Foods Prepared On-Site in Retail and Food Service Establishments

The Task Force tried to determine whether a similar regulation could be applied to foods prepared on-site in retail and food service establishments. In this case, a regulatory limit on the finished product would have to be implemented by thousands of individual businesses, including retail bakeries, grocery stores, restaurants, fast food outlets and food service operations. These establishments are not necessarily in a position to analyze their finished products. Their recipes, menus and product lines often change frequently, and testing every product would be logistically difficult and costly. It would be easier for these establishments (and for regulatory enforcement personnel) if they could rely on a supply of ingredients already formulated to be in compliance with trans fat limits. Thus to simplify

¹⁹ In order to carry a “trans fat free” claim, a food must contain less than 0.2 grams of trans fat per serving, as stated on the label, and as per a reference amount specified in the regulations:

- less than 0.2 grams of trans fat; and
- 2 grams or less of saturated fats and trans fats combined (15% or less energy from the sum of saturated fats and trans fats).

compliance and enforcement at the retail and food service level, the Task Force believes it would be better to regulate the trans fat content of ingredients or *inputs*. A regulatory limit on the trans fat content of inputs would shift the regulatory burden up the food supply chain and simplify compliance and enforcement by vastly reducing the number of players involved. Multinational restaurant chains might need to modify some of their menu items for their Canadian operations, as they did in Denmark.

5.3 Choosing the Limits

The Task Force had numerous discussions regarding what level it should recommend as the maximum limit for the trans fat content of foods in Canada. The many factors considered in making this decision are summarized below.

- *Evidence regarding the serious health effects of trans fats*
Evidence on the adverse health effects of trans fats from both observational epidemiology and metabolic studies are consistent and, combined, form a sufficient basis for concluding that trans fats increase the risk of heart disease. It has been estimated that a decrease in trans fat intake of 2% of energy would reduce coronary heart disease risk by 5% or more.
- *Current dietary recommendations regarding trans fats*
There is no physiological requirement for trans fats – they have no intrinsic health value above their caloric value – and therefore their intake should be as low as possible.²⁰ As stated above, the World Health Organization recommends that the trans fat intake of daily diets should be less than 1% of energy intake.
- *The unavoidable presence of trans fats in typical diets*
The majority of trans fat in foods is industrially produced through the partial hydrogenation of vegetable oils. However, small amounts of trans fats (generally 2–5% of the fat content) are naturally present in dairy products and in meat from cows, sheep and other ruminants, and the trans fat content of lamb may be as high as 8%. These trans fats are formed through bio-hydrogenation, that is, bacterial transformation of monounsaturated and polyunsaturated fats in the animals' digestive tracts. It is also difficult to avoid the formation of very small amounts of trans fats (0.2–1% of total fat) during the refining of vegetable oils or when using oils for deep frying at high temperatures over long periods.
- *Industrially produced trans fats versus total trans fats*
To date only a few studies have attempted to differentiate between the effects on coronary heart disease risk of industrially produced and naturally occurring trans fats and the data are too scarce to be conclusive.

That said, it should be noted that Canadians' total dietary intake of trans fats has increased dramatically in the past 30 to 40 years because of the proliferation of

²⁰ Institute of Medicine, *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids* (Washington, D.C.: National Academies Press, 2002).

partially hydrogenated canola and soybean oils and their use in food manufacturing. According to the modelling of trans fat intake conducted by Health Canada, just reversing this trend would reduce trans fat intake to within current dietary recommendations.

The reduction of industrially produced trans fats from processed food, coupled with consumer adherence to dietary guidelines (such as *Canada's Food Guide to Healthy Eating*) that emphasize the consumption of lower-fat dairy products and leaner meats, would result in reduced intake of both industrially produced and naturally occurring trans fats as well as saturated fats.

- *Current definition and methodology used for declaring trans fats on product labels*
The definition of trans fatty acids²¹ and the methodology for declaring trans fats on product labels that are being accepted internationally are based on the total amount of trans fats, as defined under Codex, American and Canadian nutrition labelling regulations, not just on industrially produced trans fats.
- *The contribution of low-fat foods to trans fat intake*
The Task Force briefly discussed whether low-fat foods should be exempted from a trans fat limit; however, it was felt that low-fat foods do not warrant special treatment because they may contribute significantly to trans fat intake. For example, the consumption of six servings of low-fat foods containing 0.5 grams of industrially produced trans fats would result in an intake of 3 grams of trans fat. This would exceed 1% of overall energy intake.
- *The trans fat content of healthier alternatives or Innovation in oil processing to produce healthier alternatives*
Innovations in oil processing have increased the ability of industry to produce oils and soft, spreadable (tub-type) margarines that contain about 1% (or slightly more) of total fat as trans fat.

The Task Force also wanted to allow use of all available healthier alternatives, including fully hydrogenated oils interesterified with liquid oils. This contributed to the Task Force's decision to choose a higher limit on the trans fat content of foods than the limit set in Denmark.

In addition, for some food applications a harder fat is needed. It is possible to produce hard margarines and shortenings containing less than 2% of trans fat by using palm and palm kernel stearin instead of partially hydrogenated oil made from canola or soybean oils. However, other alternatives available in the North

²¹ Trans fatty acids are isomers of monounsaturated and polyunsaturated fats that contain one or more isolated or non-conjugated (interrupted by at least one methylene group, i.e. CH₂) double bonds in the trans configuration (that is, the hydrogen atoms linked to the carbon atoms on both sides of the double bond have an opposite position with respect to the double bond). Canada, *Food and Drug Regulations*. In the cis configuration, these hydrogen atoms are on the same side of the double bond.

American market such as margarines and shortenings made using fully hydrogenated canola and soybean oils contain between 2% and 4% of industrially produced trans fats. (See Appendices 13 and 14.)

- *The impact of various limits on dietary intake of trans fat*
The results of the modelling in section 4.4 indicate that if a 2% limit applied to vegetable oils and soft, spreadable margarines and a 5% limit to all other foods, the average trans fat intake would decrease by at least 55% and that most of the industrially produced trans fats would be removed from the Canadian diet.

While some Task Force members wished to set a limit on the trans fat content of foods other than vegetable oils and soft, spreadable margarines at a lower level than 5%, the results of the modelling demonstrated the limited additional decrease of trans intake that would occur from imposing a limit lower than 5%. This analysis was supported by the Task Force assessment of the Danish experience and by comments during the consultations by the Danish scientific expert.

Furthermore, according to the Task Force analysis, it would not be easy to apply a lower limit than 5% to foods that contain both industrially produced and naturally occurring trans fats.

- *Feasibility and sustainability*
While the Task Force was mandated to develop strategies for limiting processed trans fats to the “lowest level possible”, it was conscious early in the process of the principles of feasibility and sustainability. There was also a desire to simplify compliance and enforcement, ensure a level playing field between the food manufacturing and food service sectors, and make the recommendations clear and easier to understand. All these factors led the Task Force away from recommending limits with multiple levels or a lower limit with various exceptions.

5.4 Research Gaps

One of the key principles guiding the work of the Task Force was that recommendations would be based on the best available evidence and the current state of knowledge. (See Appendix 6.) The Task Force believes that the strength of the current evidence is sufficient to support its recommendations. It recognizes, however, that the current state of knowledge is limited in certain respects. In the coming years it will be important to support research in a number of areas, including but not limited to the following:

5.4.1 Clinical Nutrition Research

- Validating the biomarkers that could be used to assess the impact of different fatty acids on coronary heart disease risk, and examining some of the new markers of inflammation and endothelial integrity and homeostasis.

- Distinguishing between naturally occurring and industrially produced trans fatty acids with respect to their relative impact on the biomarkers of coronary heart disease risk.
- Examining the relative health risks posed by trans fats and saturated fats at low levels of trans fat intake (1–3% energy intake).
- Distinguishing between individual saturated fatty acids with respect to their relative impact on the biomarkers of coronary heart disease risk, in particular at levels of intake at which significant risk can occur.
- Distinguishing between synthetic and naturally occurring fat molecules, particularly triglycerides of high saturated fat content, with respect to the relative impact of the position of fatty acids on the biomarkers of coronary heart disease risk.
- Examining the safety and nutritional properties of novel oils.

5.4.2 Food and Agriculture Research

- Developing more cost-effective and standardized methods for analyzing the fatty acid content of foods in a manner that differentiates among the various trans fatty acids, including distinguishing between their plant or animal origin.
- Determining and monitoring average levels of trans fats and the factors influencing their distribution in Canadian ruminant meat and dairy products produced using different feeding regimes (e.g. grass-fed vs. grain-fed).²²
- Determining and monitoring the impact of reducing trans fat on levels of individual saturated fatty acids and levels of alpha-linolenic (omega-3) and linoleic (omega-6) acids in the Canadian food supply.
- Conducting further research and development in the area of interesterification and hydrogenation, and conducting studies on the safety and trans fat content of the resulting novel fats. Areas for study include chemical and enzymatic processes, and control of these processes.
- Continuing the development of new methods and technologies, including packaging technologies, that would enable more “trans fat free” food products to be produced by the food industry.
- Increasing the range and levels of saturated fatty acids in certain oilseed varieties, and identifying and developing possible new Canadian sources of saturated fats that can be used to produce interesterified fats and oils.

²² Recent research has shown that care practices and choices of feed for ruminants can have a significant impact on the amount and type of trans fat in the meat and milk fat from ruminants. It will be important to determine the health effect of practices which increase naturally occurring trans fat before these practices become widespread.

5.4.3 Population and Public Health Research

- Designing effective messages, targeted to key groups, about the consumption of different types of fat.
- Characterizing the fatty acid intake of Canadians, including trans fats from plants and animals, over time.
- Determining the impact of a reduction in trans fat intake on levels of saturated fats, alpha-linolenic acid (omega-3) and linoleic acid (omega-6) in the Canadian diet.
- Identifying the population subgroups at greatest risk of consuming high levels of trans fats, and evaluating their fatty acid intake after implementation of the regulations.
- Assessing the impact of social and economic factors on consumer choices and consumption of different types of fat.
- Identifying ways to shift consumption patterns toward healthier foods (e.g. fruits, vegetables, whole grains and healthier oils).

6.0 Recommendations

The Trans Fat Task Force has developed the following recommendations in response to the clear mandate provided by the Minister of Health, as well as other considerations arising during the course of its work and discussed in the previous section.

The recommendations are arranged in two parts: those that will ensure consumer protection and those that will support consumer awareness and public education. The recommendations for an appropriate regulatory framework are in boldface.

6.1 Consumer Protection

6.1.1 Regulations

The Task Force considered a range of voluntary and regulatory options, and members agreed that a regulatory approach was the better option. Among the factors considered were the Danish experience, lessons learned from nutrition labelling and other related initiatives, the need to target the full range of food products, and the need to send a strong and consistent signal to seed growers and oil producers to invest in healthier alternatives.

Application of the Regulations

The goal of the Task Force, given the dietary patterns of Canadians (including the amount of food consumed outside the home), was to find a solution that would encompass all foods sold to consumers in retail and food service establishments (e.g. in grocery stores, restaurants, fast food outlets and food service operations), whether purchased from a manufacturer or prepared on-site.

To simplify compliance and enforcement, the Trans Fat Task Force recommends that:

- **Foods purchased by retailers or food service establishments from a manufacturer for direct sale to consumers be regulated on a finished product or *output* basis, and foods prepared on-site by retailers or food service establishments be regulated on an ingredient or *input* basis.**

Enforcement of a regulation limiting the industrially produced trans fat content of all manufactured foods purchased by a retail or food service establishment would best be carried out on a finished product or *output* basis, as the Canadian Food Inspection Agency already has responsibility for inspecting manufacturing plants and stocks of imported products. The same desire to simplify enforcement would support the regulation of foods prepared on-site by retail or food service establishments on an ingredient or *input* basis.

Regulatory Limits

The following recommendations recognize the progress achieved by the edible oil industry and all of the considerations mentioned in section 5.3. The dietary intake modelling conducted by Health Canada indicated that the cumulative effect of these recommendations would result in an average daily trans fat intake by all age and gender groups of less than 1% of energy intake, as recommended by the World Health Organization.

The recommendations focus primarily on the elimination of industrially produced trans fats but are expressed as limits on the total amount of trans fats in foods, since there are no officially accepted analytical methods for distinguishing between the amounts of naturally occurring and industrially produced trans fats in foods. This approach would ensure consistency with the Canadian nutrition labelling regulations, which came into force in December 2005.

For all vegetable oils and soft, spreadable (tub-type) margarines purchased by a retail or food service establishment for sale to consumers or for use as an ingredient in the preparation of foods on-site, the Trans Fat Task Force recommends that:

- **The total trans fat content be limited by regulation to 2% of total fat content.**

For all other foods purchased by a retail or food service establishment for sale to consumers or for use as an ingredient in the preparation of foods on-site, the Trans Fat Task Force recommends that:

- **The total trans fat content be limited by regulation to 5% of total fat content.**

This limit does not apply to food products for which the fat originates exclusively from ruminant meat or dairy products.

This set of regulations has been developed to apply equally to all foods, domestic or imported, purchased by a retail or food service establishment in Canada, as per other food and drug regulations. These regulations do not apply to ingredients sold to food manufacturers, as limits have already been set for the finished products they sell to a retail or food service establishment.

Timing for Compliance

New product development is an expensive process. To comply with the new regulations, some enterprises may need to replace or reformulate more than 25% of their products, and this figure could be as high as 100% in some baking enterprises. The significant upfront costs likely mean that some enterprises, particularly small businesses, may have difficulty with a sudden transition to a market where the amount of trans fat is limited. If some firms are given a longer period for compliance, as happened when the nutrition labelling legislation was introduced, they will be able to spread out the cost of developing new products.

The Trans Fat Task Force recommends that timelines be staged to reflect legitimate challenges to implementation and to optimize public health benefits. Adjustments can be made quickly for certain oil uses (especially frying), but small businesses and certain baking applications may need more time to adjust. The Task Force estimates that it would take 12 to 18 months to develop a sufficient supply of high-oleic oils to respond to clear food service demand, expressed through signed contracts.

Some members of the Task Force also pointed out the need to avoid a situation where competition for a limited supply of the available alternatives drives up costs, hurting both industry and consumers.

An enterprise's size, the complexity of the operation, the number of products and the availability of alternatives must all be factored in when deciding timelines and extensions. These considerations were beyond the Task Force's analytical capacity. The compliance timelines for different types of enterprises should be determined through the business impact test, which is a standard government procedure when regulations are drafted.

Based on these considerations, the Task Force proposed a "2 + 2" approach: two years to develop regulations and up to two years for implementation.

The Trans Fat Task Force recommends that:

- **Draft regulations be published in the *Canada Gazette, Part I*, by June 2007;**
- **Regulations be finalized and published in the *Canada Gazette, Part II*, by June 2008;**
- **A basic phase-in period be set at one year from the date of entry into force of the final regulations;**
- **Extended phase-in periods be specified for certain applications (e.g. baking) and for small and medium-sized firms based on demonstrated need, recognizing that in most cases the transition could be made within two years of the date of entry into force of the final regulations, and that only in very special cases or applications would the phase-in period exceed two years.**

Choice of Alternatives

The Trans Fat Task Force recommends that:

- **The Government of Canada and all concerned food industry associations urge companies affected to use the most healthful oils for their food applications (as identified in Appendix 14) when reformulating foods.**

The recommendations that the Task Force sets out in this report are provided in the context of an overall, balanced diet as described in *Canada's Food Guide to Healthy Eating*. Throughout its deliberations the Task Force has kept in mind that

consumption of saturated fats should not increase significantly as a result of limitations on trans fats.

Companies should be encouraged to:

- Use oils that are high in monounsaturated fatty acids as primary alternatives to partially hydrogenated vegetable oils for frying purposes; these oils are known for their moderate to high oxidative stability and their contribution to lowering the total/HDL cholesterol ratio and coronary heart disease risk.
- Select oils that are both high in omega-3 polyunsaturated fatty acids and high to moderate in omega-6 polyunsaturated fatty acids (such as canola and soybean oil) as primary sources of vegetable oils in margarines; this measure would improve the ratio of omega-6 to omega-3 fatty acids and lower coronary heart disease risk.
- Choose oils that are moderate in omega-3 and omega-6 polyunsaturated fatty acids in shortenings used in baking and food processing; this measure would also improve the ratio of omega-6 to omega-3 fatty acids and lower coronary heart disease risk.

6.1.2 Incentives

To facilitate the reformulation of food products with healthier trans fat alternatives in accordance with the recommendations in this report, the Trans Fat Task Force recommends that the Government of Canada.²³

- Explore means to support efforts to develop new trans fat alternatives and help offset the cost of food product reformulation;
- As a priority, actively encourage Canadian research and development facilities to work with industry to develop new oilseed varieties and new trans fat alternatives;
- Facilitate and encourage access to the Scientific Research and Experimental Development Program offered by the Canada Revenue Agency.

To help the food industry communicate the healthier nature of its products to consumers, the Trans Fat Task Force recommends that the Government of Canada:

- Explore the possibility of allowing “trans fat free” claims that are more appropriate for the food service sector.

²³ These recommendations are to be considered in conjunction with those that appeared in the Task Force’s interim report. (See Appendix 10.)

To help small and medium-sized enterprises prepare for compliance with new regulations, the Trans Fat Task Force recommends that the Government of Canada:

- Develop an effective outreach program aimed at small companies to communicate the changes, encourage early action and provide links to technical assistance.

To enhance the capacity of the Canadian agri-food industry to take a leadership role in this area, the Trans Fat Task Force recommends that the Government of Canada:

- Continue to collaborate with industry in developing new opportunities for the production of canola and other oilseeds.

6.1.3 Research

To fill identified research gaps, including those outlined in section 5.4 of this report, and expand the availability of research results, the Trans Fat Task Force recommends that the Government of Canada:

- Encourage the relevant federal granting councils and federal departments to support research into the issue of trans fats, which would include but not be limited to the key areas outlined in section 5.4, and to ensure that the results of this research are transferred to the relevant policy-makers.

6.2 Consumer Awareness and Public Education

In addition to the recommendations contained under “Guidance to Consumers” in its interim report (see Appendix 10), the Trans Fat Task Force recommends that the Government of Canada:

- Mount a public awareness campaign, in conjunction with appropriate voluntary agencies, on how to read the new labels, with a particular focus on serving sizes and reference amounts;
- Review and as appropriate revise its messaging with respect to fat consumption in order to more clearly communicate the effects of consuming not only processed trans fats but also other types of fatty acids and to provide consumers with advice;
- Cooperate with organizations and groups that work closely with consumers, particularly low-income consumers, to raise awareness of the health effects of the various types of fatty acids and to offer practical guidance regarding purchasing and dietary habits;
- Move forward on the federal/provincial/territorial Healthy Living Strategy²⁴ in order to ensure that fat consumption is properly understood in the context of a more healthful diet and physical activity.

²⁴ The Integrated Pan-Canadian Healthy Living Strategy, approved by Federal, Provincial and Territorial Ministers of Health, provides a conceptual framework for sustained action based on Healthy Living. It envisions a healthy nation in which all Canadians experience the conditions that support the attainment of good health. The goals of the Strategy are to improve overall health outcomes and to reduce health disparities.

7.0 Summary and Conclusions

This report concludes the work of the Trans Fat Task Force. It outlines the methodologies, process, considerations and evidence used by the Task Force in arriving at recommendations to effectively eliminate or significantly reduce processed trans fats in the Canadian diet.

The Task Force consisted of a diverse group of scientific experts, industry stakeholders and public health advocates. While the Task Force members had different stakes in the trans fat issue, all agreed on the negative health effects of trans fats and the need to work together to improve the overall health and well-being of Canadians.

The Task Force noted the impressive progress made by some segments of the food industry in reducing the amount of processed trans fats in foods sold in Canada. However, it concluded that a regulatory approach would be needed to ensure that the trans fats in all processed foods are effectively eliminated or reduced to the lowest levels possible.

In presenting this report, the Task Force has attempted to address all the components of its mandate and to deal with all the issues inherent in such a complex subject. Some issues, such as the international trade implications of regulations, were beyond the expertise of the Task Force members and will need to be dealt with through the normal course of the regulatory development process.

The recommendations in the report illustrate the efforts of the Task Force to find consensus on a challenging and important public health issue. The recommendations also reflect a “made in Canada” solution. While the Danish experience may have motivated action in Canada, the Task Force decided on a uniquely Canadian approach that takes into account the Canadian marketplace, dietary patterns, existing mechanisms such as mandatory labelling and a strong desire to foster the development and use of healthier alternatives to trans fats without relying extensively on saturated fats.

The proposed regulations, broad-based industry incentives and research will:

- Significantly improve the heart health of Canadians and save lives;
- Reduce the average daily intake of trans fats by Canadians of all age groups to less than 1% of energy intake, consistent with current dietary recommendations;
- Ensure that all Canadians, particularly those at the highest consumption levels benefit from the virtual elimination of industrially produced trans fats;
- Provide an approach that is feasible and consistent with Canada’s approach to nutrition labelling;
- Promote the development of alternative supplies of more healthful alternatives to trans fats; and
- Help level the playing field for all players in the food industry that must effectively eliminate industrially produced trans fats from their products.