



Obesity

in **CANADA**

**A Whole-of-Society Approach
for a Healthier Canada**

Report of the Standing Senate
Committee on Social Affairs,
Science and Technology

The Honourable Kelvin Kenneth Ogilvie, Chair
The Honourable Art Eggleton, P.C., Deputy Chair

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ORDER OF REFERENCE

Extract from the Journals of the Senate of Wednesday, January 26, 2016:

The Honourable Senator Ogilvie moved, seconded by the Honourable Senator Greene:

That the Standing Senate Committee on Social Affairs, Science and Technology be authorized to examine and report on the increasing incidence of obesity in Canada: causes, consequences and the way forward, including but not limited to:

- (a) food consumption trends;
- (b) specific elements of diet;
- (c) the processed food industry;
- (d) lifestyle;
- (e) provincial and federal initiatives; and,
- (f) international best practices.

That the papers and evidence received and taken and work accomplished by the committee on this subject during the Second Session of the Forty-First Parliament be referred to the committee; and

That the committee submit its final report no later than March 31, 2016 and that the committee retain all powers necessary to publicize its findings until 180 days after the tabling of the final report.

After debate,

The question being put on the motion, it was adopted.

Charles Robert
Clerk of the Senate

MEMBERS

The Honourable Senators who participated in this study:

Kelvin Kenneth Ogilvie, Chair

Art Eggleton, P.C., Deputy Chair

Linda Frum

Pana Merchant

Nancy Ruth

Nancy Greene Raine

Judith G. Seidman

Carolyn Stewart Olsen

Ex Officio Members:

The Honourable Senators Claude Carignan, P.C. (or Yonah Martin).

Former Committee members who have participated in this study:

The Honourable Senators Chaput, Enverga, and Wallace.

Other Senators who have participated from time to time in the study:

The Honourable Senators Beyak, Cordy, Lang, Manning, Moore, Ngo, Patterson, Rivard, Seth, Tannas, Unger and Wells.

Parliamentary Information and Research Services, Library of Parliament:

Sonya Norris, Analyst.

Clerk of the Committee:

Keli Hogan (42nd Parliament, 1st Session).

Jessica Richardson (41st Parliament, 2nd Session).

Senate Committees Directorate:

Debbie Larocque, Administrative Assistant (42nd Parliament, 1st Session).

Diane McMartin, Administrative Assistant (41st Parliament, 2nd Session).

CHAIR'S NOTE

This report reflects expert testimony given to the Standing Senate Committee on Social Affairs, Science and Technology during the previous parliament between October 2014 and June 2015. The committee acknowledges that there have been some government activities since that time that are not included here. In particular, the committee notes that the Minister of Health received a Mandate Letter in late 2015 directing Minister Philpott to restrict the marketing of unhealthy food and beverages to children, to regulate trans fat and salt in processed foods and improve food labelling with respect to added sugars. In addition, both the Minister of Health and the Minister of Indigenous and Northern Affairs have been given a mandate to improve the Nutrition North program for Northern communities.

The committee is pleased to see that Ministers have been given mandates to address some of the issues that this committee has highlighted in recommendations. The committee urges the federal government, primarily the Minister of Health, to move decisively and to quickly implement the recommendations contained in this report.

REPORT HIGHLIGHTS

There is an obesity crisis in this country. Canadians are paying for it with their wallets — and with their lives.

But there is hope.

An extensive study conducted by the Standing Committee on Social Affairs, Science and Technology charts a course to a leaner, healthier future.

Over the course of nearly two dozen meetings, the committee heard expert testimony from a range of Canadian and international stakeholders including individuals representing health and exercise professions, diet and health research sectors, food and beverage industries, Aboriginal groups, health charities, as well as the federal government.

The committee's findings show the vast scope of this epidemic:

- Each year 48,000 to 66,000 Canadians die from conditions linked to excess weight;
- Nearly two thirds of adults and one third of children are obese or overweight; and
- Obesity costs Canada between \$4.6 billion and \$7.1 billion annually in health care and lost productivity.

This report describes an innovative, whole-of-society approach to address this important issue — and urges bold but practical steps that can and must be taken to help Canadians achieve and maintain healthy weights.

Tipping the Scales Towards a Healthy Future

Every Canadian is affected in some way by the obesity crisis.

The proliferation of fast and processed foods, coupled with the overwhelming use of electronic devices, have led to an environment where it is all too easy to eat poorly and remain inactive.

This is not the product of a collective loss of willpower — low-income Canadians, for example, often rely on unhealthy foods because these items are cheaper and sometimes all that is available.

Confusing nutritional labelling doesn't help: there are 56 different names for sugar alone and manufacturers do not have to group them together.

Canada's dated food guide is no longer effective in providing nutritional guidance to Canadians. Fruit juice, for instance, is presented as a healthy item when it is little more than a soft drink without the bubbles.

Canadians must renew their efforts to eat healthy and to get active — and government and industry must give citizens the means and motivation to make informed lifestyle choices.

From policy makers to parents, industry insiders to family doctors, all Canadians have a role to play to beat back this crisis.

Recommendations: A Call for A National Campaign to Combat Obesity

This report urges the federal government to take aggressive measures to return Canadians to healthy weights. The report's 21 recommendations provide the tools to do so.

The government should:

- Consider a tax on sugar- and artificially-sweetened drinks;
- Implement effective tax levers to encourage healthy lifestyles; and
- Ban the advertising of food and beverages to children.

Other key recommendations would make it easier for Canadians to make informed decisions about their diet. The committee urges the government to:

- Standardize and expand nutritional information on food packaging to make it easier to understand;
- Increase awareness of the potential harms of processed foods and the benefits of fresh, whole foods;
- Overhaul Canada's dated food guide.

Many of the ways to fight obesity are beyond the federal government's direct control. In this report, the committee urges Health Canada to work with the provinces and territories on coordinated policy changes across the country. It recommends that Health Canada:

- Engage provinces and territories to improve doctors' training on diet and exercise and encourage doctors to give patients prescriptions for exercise;
- Help vulnerable populations to adopt healthier lifestyles; and
- Teach and practice active living in schools and promote it in the community.

INTRODUCTION

On February 26, 2014, the Senate adopted an Order of Reference authorizing the Standing Senate Committee on Social Affairs, Science and Technology (“the committee”) to examine and report on the increasing incidence of obesity in Canada. Between October 29, 2014 and June 18, 2015 the committee held 22 meetings and heard from a broad range of experts whose testimony addressed the issues concerning obesity, namely diet, physical activity and best practices. Over the course of this study, the committee heard testimony from diet experts, nutrition researchers, food retailers and manufacturers, critics of the food industry, healthy living researchers and advocates, medical experts, health charities’ representatives, advocates of the social determinants of health, and the Assembly of First Nations. Finally, the committee heard from Health Canada, the Public Health Agency of Canada, the Canadian Institutes of Health Research and Statistics Canada officials.

CONTEXT

In the simplest terms, overweight and obesity are the result of a sustained imbalance between the energy intake of an individual, namely food and beverage consumption, and the individual’s energy needs, namely, the sum of the body’s basic metabolic requirements plus additional physical activity. The factors that can affect this balance are numerous and are discussed later in this report.¹

In the past three to four decades there has been a drastic increase in the proportion of overweight and obese Canadians. Statistics Canada data reveals that almost two thirds of Canadian adults are now either overweight or obese. Sadly, the increase in obesity rates among children is also dangerously high. About 13% of children between the ages of five and 17 are obese while another 20% are overweight. These numbers reflect at least a two-fold increase in the proportion of obese adults and three-fold increase in the proportion of obese children since 1980.

Canada is not alone in this disturbing trend. The entire industrialized world has shown much the same increase in obesity rates. However, data from the Organisation for Economic Co-operation and Development (OECD) places Canada among the countries with the highest obesity rates. In fact, according to the OECD, Canada ranks fifth among 40 countries for obesity prevalence, measured at 25.4% of adults. Only the United States, Mexico, New Zealand and Australia have higher obesity rates than Canada. In terms of childhood obesity, Canada does not compare much better, ranking sixth in a similar list. Developing countries are also following this trend, although they lag behind industrialized countries by about twenty years.

¹ The committee notes that although there are well-known biologic and genetic abnormalities that can cause or predispose an individual to become obese, these are not among the factors that have contributed to the observed increase in recent decades.

Over the same period, there has also been an increase in the rate of several chronic conditions; Type 2 diabetes, heart disease, stroke and some cancers, and therefore an increased demand on the health care system. As well, the increased burden of ill health on overweight and obese Canadians results in a lower rate of employment as well as a higher absenteeism rate and decreased on-the-job productivity.

It was within this context – increasing rates of obesity and chronic disease in recent decades – that the committee undertook its study to determine what actions should be taken to help Canadians get back to healthy weights.

HEALTH CANADA'S ROLE IN HEALTHY EATING PROMOTION

Health Canada is responsible for providing information on the safety and nutritional value of food as well as promoting the nutritional health of Canadians. The department addresses these responsibilities, in part, through dietary advice and nutrition labelling, as described below.

Health Canada is responsible for creating and promoting its food guide called *Eating Well with Canada's Food Guide* (“the food guide”), which is intended to help Canadians identify and choose a balanced and healthy diet. These guidelines categorize food into four food groups: fruits and vegetables; grain products; dairy; and meat and alternatives. The guidelines also provide recommendations on the number of daily servings that should be consumed from each group. The food guide is revised periodically, most recently in 2007.²

Health Canada is also responsible for establishing food labelling requirements. Nutrition labelling on food is intended to help consumers make informed choices about the foods they buy and eat and therefore promote healthy food choices and discourage unhealthy food choices. Food labelling includes: ingredient listing; information regarding specific nutrients and calories; and, claims regarding a specific characteristic of a food in relation to a nutrient or its calorie content. In Canada, ingredient listing and nutrition labelling are mandatory under the Food and Drug Regulations (“the regulations”) on most prepackaged foods.

Ingredients must be listed in descending order of their proportion or percentage in most prepackaged products that consist of more than one ingredient.³ Information about the caloric content and nutrient values of most prepackaged foods is displayed within the Nutrition Facts table. Nutrients can be broken down into macronutrients, which provide calories, and micronutrients, which do not. Micronutrients include the vitamins and minerals that are found in the different food groups. There are only three macronutrients: fat, protein and carbohydrates.

² Health Canada's [Eating Well with Canada's Food Guide](#).

³ *Food and Drug Regulations*, B.01.008

The Nutrition Facts table has been mandatory in Canada since 2007, although all large companies have been required to include them on their products since 2005. It provides standardized information about a food's macronutrient content, namely fat, protein and carbohydrate as well as the micronutrient vitamins and minerals such as sodium, calcium and iron. Information about fat content is further broken down to trans fat and saturated fat content while fibre and total sugar content is provided under the carbohydrate content. The table also presents the percent recommended daily value for several nutrients per single serving of the food.⁴

There are two types of claims that can be included on food packaging; nutrient content claims and health claims. Nutrient content claims on prepackaged foods may highlight specific nutrients like fat or fibre, such as "high in fibre," or "low in fat" but the wording of the claim must be specifically permitted by regulation.⁵ Like nutrient content claims, health claims are also permitted on prepackaged foods as long as they fulfill the requirements set out in regulations. An example of a health claim is "A healthy diet containing foods high in potassium and low in sodium may reduce the risk of high blood pressure, a risk factor for stroke and heart disease. (Naming the food) is low in sodium."⁶

For both nutrient and health claims the food regulations specify the criteria that a food must meet to qualify for a claim and the wording that must be used to ensure that they are consistent and not misleading. If a product meets the regulatory criteria, manufacturers can choose whether or not to add a nutrient content or health claim on the product label.

Both the food guide and nutrition labelling are intended to help Canadians choose a healthy diet. However, there is a lack of Canadian data comparing general consumption trends over time, or how Health Canada's food guide or nutrition labelling have affected consumption patterns. Members were told that total daily consumption per person has risen in Canada since the 1980s by about 240 calories, although witnesses indicated that data were quite limited on specifics.

CAUSES

1. Food Consumption Patterns

Pat Vanderkooy, of the Dietitians of Canada, noted that data was collected in the 1970s under the Nutrition Canada National Survey and again in 2004 under the Canadian Community Health Survey (CCHS), but that little data is available for the intervening years. She pointed out that the food supply underwent significant changes in that period and that the collection of national data during those years may have been able to provide critical information about consumption trends. In particular, a vast assortment of highly processed

⁴ Ibid., B.01.401

⁵ Ibid., B.01.503

⁶ Ibid., B.01.601

and ready-to-eat prepackaged foods was developed over this time frame and has become ubiquitous in the food supply. This category of food is discussed further on in this report.

In terms of trends in consumption of some nutrients, the 2004 CCHS provides some broad comparison with the 1972 data from the Nutrition Canada Survey, although the data cannot be statistically compared due to differences in data collection. Fat consumption in the early 70s was estimated to be about 40% of total calories and Canadians were encouraged to reduce fat consumption as a result. By 2004, fat consumption accounted for 31% of total daily calories. Witnesses noted that obesity doubled for adults and tripled for children over this timeframe suggesting that dietary fat is unlikely to be a primary contributing factor.

The committee was presented with data from the United States about consumption of refined carbohydrates since 1960. Carbohydrates include fibre, starch and sugars and refined carbohydrates refer to processed grain products as opposed to whole grain foods. Consumption of refined carbohydrates steadily increased between 1980 and 2000 in the United States and members were told that a similar trend would be expected in Canada.

Even recent point-in-time consumption data is lacking in Canada. While the committee was told that Statistics Canada is starting to collect the data again, the most recent survey available about eating habits is the 2004 CCHS. At that time the survey found that two out of three children were not getting the recommended daily servings of milk products, one in four children aged 4 to 8 and almost one in two of the elderly did not get the minimum five servings of grain products. For vegetables and fruit, consumption rates are even worse. Data show that 70% of children aged 4 to 8 did not meet the five-serving minimum. This rises slightly for children 9 to 13 to 65% and again for adults but only to 50%. Well over 25% of the calories for both children and adults are from the “other foods” category that Health Canada advises should be limited in the diet. The “other foods” category is broad and includes candy, snack foods and soft drinks, foods that are typically nutrient-poor and high in salt, sugar and/or fat, which are discussed further below.

2. Specific Elements of the Diet

Throughout the study, the committee heard about the role of various nutrients with respect to the increasing rate of obesity – salt, sugar and fat being the primary targets of these discussions.

Salt, a simple compound of sodium and chlorine, itself provides no calories in the diet and is therefore not directly blamed for increased body fat. However, salt is used to increase the palatability and improve the shelf-life of processed and prepackaged foods. Morton Satin of the Salt Institute informed members that salt consumption decreased following the invention of refrigeration. He also indicated that most people are capable of excreting sodium in far greater quantity than they are likely to consume it. Witnesses did not emphasize the negative health effects that have been associated with high sodium consumption in recent years, including high blood pressure and cardiovascular disease. Rather, members were told, that a specific sub-group of the population, about 15% of the population is “salt

sensitive” and should consume a sodium reduced diet. Several witnesses pointed to salt as a contributor to the increased rate of obesity through its role in making high-calorie, low-nutrient foods palatable and to its high content in highly processed, prepackaged foods, which were described by several witnesses as a main contributor to rising obesity levels.

Fat has long been associated with excess body fat and increased risk of various chronic diseases. Of the three macronutrients (protein, carbohydrates and fat), fat is the most calorie dense. Dietary fat comes from both plant and animal sources and plant-sourced unsaturated fat has long been thought to be “healthier” than animal-sourced, saturated fat. As such, dietary advice has emphasized an overall reduction in consumption to about 30% of total calories, maximizing unsaturated fat and restricting saturated fat. All fats provide the same calorie content.

Government dietary advice to limit fat consumption dates back in Canada to the 1982 version of the food guide, with further restrictions recommended in the 1992 version. Several witnesses noted that obesity rates have increased dramatically since dietary advice has emphasized a reduction in fat consumption. The committee was told that Canadians have heeded this advice and that fat consumption has indeed declined since 1980 with respect to consumption of dairy and red meat.

It was proposed by some witnesses that there is little or no evidence that fat, in particular saturated fat, should be limited in the diet. The committee was told that this advice is rooted in studies from the 1950s and 1960s that have since been reviewed and been found to have been poorly designed, misinterpreted or over-interpreted. Nina Teicholz, author of *The Big Fat Surprise – Why Butter, Meat and Cheese Belong in a Healthy Diet* (2014), proposed that people have compensated for the reduction in fat intake by increasing consumption of carbohydrates, particularly in the form of processed foods.

As stated earlier, carbohydrates, which are also called saccharides, include fibre, starch and sugars. Sugars include simple monosaccharides, like glucose and fructose, or two monosaccharides joined together as a disaccharide, like sucrose which is made of one glucose molecule attached to a fructose molecule. Starch, a polysaccharide, is a large molecule, a polymer, of multiple glucose molecules joined together through specific atoms. Starch is digestible in the body by enzymes that break the starch down into its constituent glucose molecules. Fibre is also a polymer made up of glucose molecules, however the specific bonds between glucose molecules cannot be broken down by the body and therefore fibre is not digestible. While fibre is associated with some health benefits such as digestive regularity, some cholesterol-lowering capacity and helping to manage glucose levels, there is no dietary need for starch or sugars. The body is able to make glucose as its energy source using either fat or protein.

Carbohydrates are natural components of fruits, vegetables and grains. However, these whole foods are not necessarily the primary source for dietary carbohydrates in Canada. The committee was told by several witnesses that consumption of refined carbohydrates

has been increasing since the 1980s. Refined carbohydrates include processed grains, refined flours, fruit and vegetable juices, and refined sugars such as high fructose corn syrup. Sandra Marsden of the Canadian Sugar Institute testified that sugar consumption has declined in recent years, however, as that organization represent the sucrose industry (the sugar extracted from beet and sugar cane), this decline seems to be only associated with sucrose and not all sugars combined. The committee was told that the decrease in consumption of sucrose has been accompanied by a larger increase in consumption of high fructose corn syrup (HFCS). HFCS is processed from corn starch. The processing not only breaks up the starch into its constituent glucose molecules, but it also converts some of the glucose to fructose. Members were told that sugar, mostly sucrose and HFCS, is added to as much as 80% of foods.

A number of witnesses also told the committee that sugary beverages are the primary source of added sugar in our diet and are the primary driver of obesity. They noted that these beverages have little or no nutrient value while being calorie-rich. Further they indicated that these are 'invisible' calories as they do not contribute to satiety and are simply added calories over and above food intake. Some witnesses offered testimony that sugar is addictive and that it promotes overconsumption.

3. Processed and Ready-to-Eat Food

Considerable testimony was offered to the committee regarding the increasing consumption levels of prepackaged, processed and ready-to-eat foods. Witnesses explained that these ultra-processed foods, like instant noodles, prepackaged pizzas, confections, soft drinks and salty snacks, are manufactured in several stages using multiple processing techniques. The committee was told that this category of food now accounts for as much as 62% of the Canadian diet.

There is a consensus among witnesses that a healthy diet must centre on whole foods, combination foods that have been freshly prepared (preferably at home) or foods that have required only minimal processing such as dairy. Witnesses stressed that consumption of highly processed foods should be kept to a minimum or preferably avoided altogether. These foods were consistently described as being calorie-rich, nutrient-poor and high in salt, sugar and/or fat.

4. Lifestyle

Several witnesses commented on the role of physical activity within the context of the increasing rate of obesity. Testimony referred to three distinct categories of physical activity. These are organized sport and exercise programs, active play and the activities of daily living.

a. Organized Sport and Exercise Programs

This category of physical activity refers to structured activities, mainly sport teams for children and membership-based gym programs or regular high-intensity exercise like running for adults. The committee was told that there is no evidence that this category of physical activity has declined over the period of increasing obesity levels. In fact, there is some data to suggest that participation in these programs has increased. However, some witnesses pointed out that these activities can include a lot of non-active time, particularly in the case of children’s sporting activities.



b. Active Play

Witnesses commented frequently on the disappearance in recent decades of “active play” by children. This refers to children actively pursuing unstructured physical activity within community neighborhoods; playing tag, climbing trees, throwing and kicking balls, etc. Many witnesses stated that this category of physical activity has been discouraged by parents due to a perception that it is not safe and by schools due to fear of litigation in response to injuries. The committee was told that by keeping children inside, parents not only deprive them of much needed exercise, but that by staying inside, often in front of a screen, children will tend to consume more, and usually unhealthy, snacks.

c. Activities of Daily Living

The final category of physical activity that was discussed by witnesses was the decrease in physical activity by virtue of all of the labour-saving devices that have been developed in past decades. Not only is eating too easy, with the vast selection of ready-to-use meal ingredients, nutrient-poor snacks and ready-to-eat meals, but everyday tasks have been made easier as well. House work and yard work are dominated by automatic machines and it is not uncommon for homeowners to hire out this work. Even professions have

become more sedentary over the past few decades. The emergence of the personal computer was named by Robert Dent of the Canadian Association of Bariatric Physicians and Surgeons as a primary reason for our sedentary lifestyle. So many things can be accomplished using labour-saving devices or by the push of a button. The committee was told that this category of physical activity is responsible for a dramatic decrease in energy expenditure in recent decades.

It is clear that there are many factors that affect weight gain in individuals. However, diet and exercise affect everyone. The committee heard repeatedly that you cannot out run or out-exercise a bad diet. Furthermore society has developed infrastructure and policies that mitigate against active lifestyles. Policies that prevent children from being active in the school yard, playground and elsewhere have largely succeeded in eliminating “free-range” children. The design of modern communities far from services with few or no sidewalks, playgrounds and walking trails is just one example of modern infrastructure that reduces physical activity.

Despite the observation that a large proportion of Canadians, both children and adults, do not meet the physical activity guidelines that are issued by the Canadian Society for Exercise Physiology, overall, most witnesses agreed that physical activity itself may not be primarily to blame for the increase in obesity. However, they noted that physical activity can help to mitigate the negative health effects of excess body fat. As such, witnesses urged increased physical activity not as a means of weight loss but as a means of improving health outcomes.

In addition to the change in physical activity levels, several witnesses noted the increased tendency of Canadians to eat their meals and snacks at restaurants, delicatessens and fast food outlets. This lifestyle change brings about similar consequences as the increased consumption of processed and prepackaged foods since the foods are often higher in fat and the serving sizes are large. The committee was told that meals obtained at food-service establishments are on average 20% higher in calories than those prepared at home.

5. The Obesogenic Environment

Most witnesses blamed the obesogenic environment for the rising levels of obesity over the past few decades. They stressed that climbing obesity rates have not been the fault of individuals but rather a direct consequence of the multitude of environmental changes over this period. The term “obesogenic environment” refers to changes in the food environment as well as changes in physical activity demands that have been described above. That is, the drastic change in the global food supply, the huge increase in fast food outlets and the loss of a “food culture” to explain the change in eating habits over recent decades combined with the overall decrease in the daily activities of living, have resulted in the “obesogenic environment”: an environment that makes it too easy to eat poorly and remain sedentary.

6. Social Determinants of Health

Several witnesses discussed the role of the social determinants of health within the context of increasing obesity rates. It is well established that the social determinants of health, which include the factors affecting an individual's social and financial situations, affect health status. In terms of obesity, the social determinant that was most often discussed was socio-economic status, which relates to household income, education level and occupation. In this regard, the committee was told that men of higher socio-economic status and women of lower socio-economic status have the highest obesity rates. Further, there is a greater correlation between education and obesity than there is between income and obesity. Poverty, the committee was told, is more strongly linked to behaviour, both diet and type of physical activity, than it is with obesity itself.

However, food insecurity, which relates to an individual's or household's inability to access or purchase an adequate supply of food on an ongoing basis, is directly related to income. In Canada, 1 in 8 households is food insecure, but this increases to 70% of Canadians who receive social assistance. Witnesses pointed out that poverty deprives people of the opportunity to eat healthy foods. This may be because they live in urban food deserts, don't have the time or capacity to prepare fresh meals, or, most likely, because the food available to them is the cheaper ready-to-eat meals and highly processed foods. In short, low-income Canadians are often restricted to the foods that are available and that they can best afford, which are generally speaking, the least healthy.

a. Canada's Aboriginal Population

A number of witnesses mentioned that the Aboriginal population in Canada (First Nations, Inuit and Métis) is one of this country's most vulnerable groups with respect to low socio-economic status. They emphasized that poverty is widespread among this population, both on and off reserve. Rates of overweight and obesity in First Nations communities are very high for all age categories. Among adults, almost 35% are overweight while another 35% are obese, which is significantly higher than among the Canadian general population. The most recent data for children under eleven years of age is that 62.5% are either overweight or obese, which is considerably higher than the rest of children in Canada.⁷

Peter Dinsdale, Chief Executive Officer of the Assembly of First Nations, stated that children are becoming less engaged in traditional activities for a variety of reasons, including the absence of a traditional land base that can more adequately support hunting, fishing and trapping activities. Eating traditional foods, it was explained, is linked to a traditional land base. However, committee members were told that lack of potable water in multiple First Nations communities is of greater concern than is accessibility to food or infrastructure for physical activity.

⁷ First Nations Information Governance Centre, [First Nations Regional Health Survey \(RHS\) 2008/10: National Report on Adults, Youth and Children living in First Nations Communities](#).

Over half of First Nations' households are food insecure. Perishable foods cost more in Northern and remote communities due to a number of factors, including the cost of flying foods to each community, as well as the high cost of fuels and electricity in the North, which affect the cost of food storage and shelving. Indigenous and Northern Affairs Canada implemented the Nutrition North Canada program (Nutrition North) in 2011 to increase access to perishable and nutritious food for Northern communities. The program provides subsidies directly to certain Northern retailers in eligible communities who are then responsible for passing the subsidy on to community members. However, Katie-Sue Derejko, a senior policy analyst with the Assembly of First Nations, described some of the issues that the food subsidy program has produced. These issues, which were raised in the 2014 Fall Report of the Auditor General, include loss of eligibility for some communities that had benefitted from the previous Food Mail Program and the lack of accountability for retailers in passing the subsidies along to the communities. Without effective cost controls, perishable foods, which are healthier, have remained unaffordable to First Nations' communities. This leaves the cheaper and less healthy prepackaged, processed and ready-to-eat foods as the only affordable option.

The committee's examination of the causes of obesity revealed some important insights. First, the complete picture is quite complex. While weight gain does come down to calories in and calories out, the factors that influence this equation are numerous and complicated. Although there may be a tendency to declare that people who are overweight are personally responsible and society is not to blame, an analysis of the issues presents a different perspective. Rather, it is virtually impossible to conclude that quite suddenly within the past few decades a large proportion of the population has collectively lost its willpower. As such, pursuing healthy weights should involve the supportive environment of a whole-of-society approach rather than be dismissed as a purely individual responsibility,

CONSEQUENCES

1. Obesity in Canada by the Numbers

Witnesses provided numerous statistics that reveal the consequences of society's changes in dietary and physical activity behaviour over the past thirty years.

a. Diet

i. Evolving Dietary Advice

In terms of eating habits, the committee was told that since the 1980s, Canadians have decreased their intake of high fat foods and increased intakes of fruits and vegetables, as recommended by the food guide. However, consumption of processed, ready-to-eat and snack foods have shown the largest increase over this period. A review of Health

Canada's food guide over the years may offer some explanation as to this change in consumption patterns.⁸

Canada's 1982 version of the food guide recommended a total of between 11 and 14 servings of food per day for adults. Slightly more were recommended in the dairy group of foods for children, adolescents and pregnant and nursing mothers. Recommendations for the three other food groups were the same for all Canadians. The 1982 food guide recommended: 2-4 servings of dairy, 2 servings of meat, fish, poultry and meat alternatives; 3-5 servings of breads and cereals; 4-5 servings of fruits and vegetables. Further, the guide suggests that a balanced diet should include a variety of foods that have a limited salt, fat and sugar content. The presentation of the recommendations was the four food groups within a circle, each taking up one quarter of the space.

The food guide was revised in 1992 with a distinctly different look. The revised food guide was presented as a rainbow, with the food groups represented as increasing proportions of the diet. It recommended that Canadian adults should consume between 15 and 29 total servings of food per day. As with the 1982 guide, slight variations in the recommended servings of dairy were suggested for children, adolescents and nursing and pregnant women. In addition, the 1992 food guide identified a fifth food group – "other foods". This group, which was not included in the rainbow, was described as foods that are not part of the four traditional food groups and may be high in fat or calories. Health Canada advised that "other foods" be consumed in moderation. This fifth food group would seem to be an attempt to acknowledge the increasing prevalence of processed, snack and ready-to-eat foods that were becoming available and ubiquitous.

Dietary advice from Health Canada changed considerably with the release of the 1992 food guide. While the meat and meat alternatives recommendation remained almost the same (2 servings in 1982 and 2-3 servings in 1992), the advice for grain products increased substantially (3-5 servings in 1982 and 5-12 servings in 1992) to the point that grain products were to make up a higher proportion of the diet than any other food group and constituted 50-60% of total calories. Grain products are high in starch as well as fibre, which are carbohydrates as described above. In addition, the 1992 version referenced "other food" only briefly and did not include it within the rainbow. As a result, "other food" may have remained invisible to most Canadians. The committee was told that the low fat diet, that was modestly introduced in 1982, with advice to choose lean cuts of meat, was more aggressively advised by recommending considerably fewer servings of meat and dairy in relation to the servings of vegetables, fruits and grain products. As well, the food guide recommended low fat dairy choices and more frequent consumption of meat alternatives in addition to choosing leaner meats.

The most recent revision of the food guide was in 2007, when it was expanded from 2 to 4 pages. The most significant change in the new version is that recommended servings

⁸ Health Canada, [Canada's Food Guides from 1942 to 1992](#).

for all of the four food groups is provided for several age ranges; children aged 2-3, 4-8 and 9-13, adolescents aged 14-18 and, adults aged 19-51 as well as over 51 years of age. Overall, the current food guide has slightly lowered the recommended amount of total servings per day to a maximum of 23 for adults. In addition, the current food guide recommends that fruits and vegetables be consumed in greater quantities than the other food groups, although only very slightly ahead of grain products. With respect to other foods, the current food guide does not suggest that there is a fifth food group like its predecessor. Rather, the food guide recommends, at the end, that Canadians “eat well” by limiting foods that are high in fat, sugar or salt. It then lists several examples, many of which are high in carbohydrates, specifically refined starches, not just sugar.⁹

This review of Canada’s food guide reveals that over the last three decades, Canadians have been told to switch from a diet of a modest number of daily servings reflecting a balance of whole foods to a low fat diet that permits significantly more servings per day, a large proportion of which should be grain products, or carbohydrates. The committee was told that, as a result, the food guide may be recommending a diet that is nutritionally insufficient with respect to vitamins D and E, potassium and choline and that only by eating artificially fortified and highly-processed cereals can the diet provide adequate levels of calcium, iron and vitamin B12.

ii. Canadians’ Dietary Intake

With respect to meeting the recommended dietary guidelines, the committee heard that vegetables and fruit are the marker of a good diet. Carolyn Gotay, a professor with the School of Population and Public Health at the University of British Columbia, informed the committee that according to 2012 data only 40% of Canadians are eating even the lower recommended number of fruit and vegetables per day, 5 servings. The food guide recommends that adults should be consuming closer to ten servings of fruits and vegetables each day. Provincially, Quebec and British Columbia consume the most in this category with 46% and 42%, respectively, meeting the minimum 5 servings per day. Only 25% and 28% of people in Newfoundland and Labrador and Nunavut, respectively, consume the recommended servings of fruit and vegetables. At the same time, Manuel Arango, of the Heart and Stroke Foundation of Canada, indicated that as much as 62% of the Canadian diet can be categorized as highly-processed, a percentage that has been rising in recent decades at the expense of whole foods. As a consequence of the increased intake of highly processed foods, sugar consumption has increased dramatically from 4 pounds annually per person 200 years ago to 151 pounds annually per person today.

The overwhelming consensus among witnesses with respect to food consumption trends was that the consequence of Health Canada’s evolving food guide and the increasing variety and availability of processed and ready-to-eat foods has been a pronounced

⁹ Health Canada’s [Eating Well with Canada’s Food Guide](#).

decrease in consumption of whole foods and alarming increase in the consumption of ultra-processed foods. As a result, Canadians are eating too much calorie-rich and nutrient-poor food.

b. Physical Activity and Inactivity

The committee heard that the participation rate in organized sport among Canadians has not declined in recent decades, and may have increased. Several witnesses emphasized that although participation in such activities is encouraged, it does not by itself ensure that Canadians, especially children, are getting sufficient exercise. They described how many of these activities include a significant amount of sedentary time and that they tend to lead people into thinking that they are doing more than enough to be considered as being physically active. Members heard, for example, sports such as hockey, soccer or basketball include a lot of instruction time outside of games, and a lot of bench time during games, when participants are idle. More importantly, several witnesses suggested that it is the decline in active, free play among children and a decline in the activities of daily living among adults that have primarily contributed to an overall decrease in physical activity.

In terms of physical activity and inactivity, in 2011 the Canadian Society for Exercise Physiology (CSEP) developed separate, evidence-based physical activity guidelines for four age-groups; children, adolescents, adults and seniors. CSEP also issued evidence-based sedentary guidelines for children and youth in the same year.¹⁰ The physical activity guidelines recommend 180 minutes per day for toddlers and pre-schoolers, 60 minutes a day for children and youth up to 17 years of age, 150 minutes per week for adults aged 18-64 years including some bone and muscle strengthening exercises, and similar guidance for seniors over 65 years with exercises aimed at improving balance and reducing the risk of falls. The sedentary guidelines recommend that children two to four years limit screen time to less than one hour a day while those under two not have any screen time at all. In addition the guidelines recommend that children under four not be sedentary for more than one hour at a time. Children and youth are advised to limit screen time to no more than two hours per day while limiting sedentary behaviour, indoor activities and motorized transport.

Unfortunately, a minority of Canadians are meeting these goals. Although 50% of Canadians believe they meet the physical activity guidelines when asked, in fact, when objectively measured, only 15% of adults are actually getting the recommended 150 minutes of physical activity per week. On average, Canadian adults obtain only 12 minutes of moderate to vigorous exercise per day. Similarly, children and youth are largely failing to meet the recommended 60 minutes of daily exercise. According to Elio Antunes, President of ParticipACTION, less than 9% of children and youth are sufficiently active, and the proportion of active kids decreases with age. The committee

¹⁰ Canadian Society for Exercise Physiology, [Canadian Physical Activity Guidelines and Canadian Sedentary Behaviour Guidelines](#).

was told that only 7% of 5-11 years olds meet the physical activity guidelines and this proportion drops to only 4% for adolescents.

With respect to the sedentary guidelines, the committee heard that less than 15% of 3-4 year olds and only 24% of 5-17 year olds are meeting the recommendations. In fact, members were told that children and youth are spending 38 to 42 hours per week in front of television, desktops, laptops, ipads and smartphones. As a result, ParticipACTION's recently released 2015 Report Card on Physical Activity for Children and Youth awarded only a D- for sedentary behaviours. Members heard that since the 1980s, the number of television broadcasters and programs as well as the number of video games has increased dramatically. Accessibility to these sedentary activities has also increased dramatically, particularly due to the emergence of the Internet.

c. Rates of Overweight and Obesity

In terms of the rates of overweight and obesity, Ian Janssen, of the Canadian Obesity Network, indicated that the most recent data from Statistics Canada's Canadian Health Measures Survey finds that 25.4% of adults are obese and another 36% are overweight, while 13% of children are obese and another 20% are overweight. These rates can be further broken down by gender. Among adults, 24.6% of women and 26.2% of men are obese. Among children, the obesity rate is 11% for girls and 15% for boys. The committee heard that while 15% of youth entered adulthood as either overweight or obese thirty years ago, today that figure is 30%. The increased incidence of obesity among children is particularly alarming since the observed natural progression of excess weight is to continue increasing by 2 to 5% each year.

The increase in obesity over the past thirty years has gone up considerably, but this measurement varies depending on the method used to measure excess weight. Statistics Canada has reported that the prevalence of obesity among adults has doubled since 1980, but this is based on a measure of body mass index, which provides conservative estimates. "Body mass index" measurements, or BMI, is measured as weight (in kilograms) divided by height (in metres) squared, resulting in BMI values in kg/m². Normal weight is considered to correspond to a BMI range of 19-24.9, overweight is from 25-29.9 and BMI values greater than 30 are considered obese. The committee was told that while BMI is an appropriate measure for population-based studies, individual obesity may be better measured by waist circumference. Members heard that a waist circumference over 35 inches for women and 40 inches for men is considered obese. Based on waist measurements, obesity among adults has tripled and has increased seven-fold among children since 1980.

Finally, committee members were told that normal weight is no longer normal. The increasing rate of obesity, as measured by BMI, has resulted in the average adult BMI increasing over the past twenty years from 22 kg/m² to 26 or 27 kg/m². Consequently, excess body weight has been normalized in our society.

d. Chronic Disease

The rising rate of obesity is symptomatic of the increasing rates of a variety of chronic conditions. These conditions include diabetes, hypertension (high blood pressure), heart disease, stroke, osteoarthritis and certain cancers including breast, endometrial, colorectal, esophageal, gallbladder, kidney, liver, pancreas and uterine. Members were told that these conditions are responsible for between 48,000 and 66,000 deaths in Canada each year. Additionally, despite the increasing life expectancy in this country, these conditions are resulting in more unhealthy years at the end of life.

Jan Hux, of the Canadian Diabetes Association, indicated that over 3 million Canadians have been diagnosed with Type 2 diabetes, and that a new diagnosis is made every 20 minutes. In turn, those individuals with Type 2 diabetes are at increased risk for heart attack, stroke, kidney failure, amputation and blindness due to the difficulty in controlling blood sugar levels. In general, individuals diagnosed with Type 2 diabetes have a reduced life expectancy of 5 to fifteen years. In terms of cancer, the committee was told that between 5,000 and 8,000 of all cancer cases in Canada can be attributed to excess body weight.

Some witnesses mentioned that these obesity-related chronic diseases, which have traditionally been considered as related to advanced age, are now being seen in young adults, and in some cases even children. Robert Dent, of the Canadian Association of Bariatric Physicians and Surgeons, revealed that obesity causes 1 in 10 of the premature deaths in those aged between 20 and 64 years.

e. The Economic Cost of Obesity

In terms of costs, the committee heard about direct and indirect costs to society due to the unhealthy weights of Canadians. Specifically, Laurie Twells, an associate professor in the Faculty of Medicine at Memorial University of Newfoundland, stated that the economic burden due to direct health care costs and indirect costs due to lost productivity associated with obesity is estimated to be between \$4.6 billion and \$7.1 billion in Canada annually.

2. The Consequences of Dietary Change

As indicated above, obesity is a risk factor for several chronic conditions. The reasons for the increased incidence of chronic disease due to excess body weight include the weight itself as the body is required to carry around added pounds which is harder on joints and muscles and is more work for the heart as it is required to pump blood through the added pounds of fat.

Some conditions seem to relate more to the diet than to the excess weight that the diet has caused. When the food guide first recommended a low fat diet, the food industry responded by producing foods that were lower in fat, with a focus on replacing saturated fat with unsaturated fat. Unfortunately, foods also started being higher in carbohydrates, specifically

refined carbohydrates including added sugar. Several witnesses explained that the dietary shift to increased consumption of refined carbohydrates and added sugars, primarily from highly processed foods and sugary drinks, has had a pronounced negative effect on the weight and health of Canadians.

a. The Effect of Refined Carbohydrates and Sugars on Body Weight

In terms of weight, witnesses described the fat-promoting effect of starch and sugar. With respect to sugars, the most abundantly consumed added sugars are sucrose and HFCS. Sugars are also consumed in whole foods, such as the fructose in fruit and the lactose in dairy. When sugar is consumed it is quickly emptied from the stomach into the small intestine because there is no further breakdown of this substance that can be done by the stomach. After the sugar has entered the small intestine, where sucrose is broken down to its constituent glucose and fructose molecules, it is absorbed into the blood stream and transported to the liver. While glucose proceeds from the liver through the blood stream without further processing to the rest of the body, fructose must be broken down further within the liver where it processes some of the fructose to glucose, which is then along the same metabolic pathway as other blood glucose or is used to produce glycogen stores in the liver. Glycogen is a glucose store that is drawn upon for energy during overnight fasting. However, some of the fructose is processed in the liver much differently and results in fat synthesis via production of triglycerides. If the liver becomes overwhelmed with fructose, fat production goes up. As such, the committee was told that increased consumption of fructose, as a component of sucrose and HFCS, results in overproduction of fat in the liver, leading to increased visceral fat, which is fat in and around the abdominal organs.

Starch, as described earlier in this report, consists of multiple molecules of glucose bound together. When starch is consumed, its digestion begins in the mouth where salivary enzymes begin to break the starch down to its constituent glucose molecules. Starch and its broken down components are quickly emptied out of the stomach and the process of digestion continues in the small intestine where pancreatic amylase continues to convert the starch into glucose. The glucose proceeds to the liver where it is secreted into the blood system in the same way that glucose is from sucrose and fructose.

Once sugar and starch have been processed into glucose the increased concentration in the blood stream stimulates the secretion of insulin from the pancreas. Insulin acts on cells throughout the body to take up glucose from the blood to supply their energy. However, insulin also promotes the synthesis of fatty tissue and inhibits the breakdown of body fat as a source of energy.

The rate at which insulin is secreted in response to dietary carbohydrates is related to glycemic index. Glycemic index is a measure of how high blood glucose rises with the consumption of a given weight of carbohydrate. In this regard, sugars have a higher glycemic index than starches since glucose is released into the blood stream more slowly with starches than with sugars. Glycemic load takes the whole volume of a food

into account in relation to the carbohydrate composition. By this measure, refined carbohydrates and added, free sugars have a higher glycemic load than do whole foods including whole grains, fruits and vegetables. The committee was told that any natural food that comes with inherent fibre will be a low glycemic load food and will not raise blood glucose as quickly or cause insulin levels to rise as high as refined carbohydrates and free sugars.

In summary, the insulin that is produced in response to dietary sugar and starch, particularly refined carbohydrates and added sugars that have a high glycemic load, promotes the production of body fat and inhibits the loss of fat.

b. The Effect of Refined Carbohydrates and Sugar on Health

Witnesses spoke of the increasing diagnoses of metabolic syndrome. As described above, the consumption of carbohydrates results in the secretion of insulin which facilitates the uptake of glucose into cells throughout the body. The consumption of refined carbohydrates and free sugars cause larger surges in insulin secretion into the blood than does the consumption of food in its natural state. Prolonged exposure to insulin results in Type 2 diabetes when cells become less sensitive to insulin, known as insulin resistance, prompting even more insulin secretion in order to get cells to respond. Eventually the pancreas' ability to produce insulin may be lost altogether.

Metabolic syndrome, or metabolic disorder, caused by insulin resistance, precedes the development of Type 2 diabetes. Metabolic syndrome includes high blood pressure, high blood glucose levels, excess body fat, primarily visceral fat, and abnormal cholesterol levels. If diagnosed early enough, the condition can be reversed through diet and physical activity. If left untreated, the condition can progress to the chronic diseases described above, namely Type 2 diabetes, heart disease, stroke and some cancers. Type 2 diabetes can include such complications as kidney failure, blindness, dementia, and amputation due to the loss of feeling in the extremities leading to increased risk of infected wounds.

While these conditions are commonly associated with excess weight, members heard that there has been an increasing incidence of them among normal weight individuals. The committee was told that although 80% of the obese population is metabolically ill, the proportion is also quite high among normal weight adults at 40%. Members were told that although life expectancy has been increasing over the past several years, so too have the number of years spent in ill health at the end of life. Several witnesses testified that the primary cause of metabolic syndrome is sugar as well as refined carbohydrates.

c. Effect of Reducing Saturated Fat

Some testimony was offered with respect to the dietary advice with regard to fat. For the past twenty five years, Health Canada has advised a low fat diet. It has also advised that dietary fat be primarily the unsaturated fats and oils from vegetables and fish and that

consumption of saturated animal fats found in meats and dairy be minimized. Members were told that while saturated fats have been part of our diet for thousands of years, vegetable oils are a recent addition in the past few decades. It was pointed out that saturated fats are chemically stable during cooking and that recent reviews of the scientific evidence suggesting that these fats are unhealthy are indicating there has been a misinterpretation of the data. Further, the committee was told that the unsaturated vegetable oils are unstable when cooked, producing oxidation products whose safety profile have not been properly assessed. As a result, it was suggested that the effect of reducing dietary saturated fat and increasing unsaturated fat may be introducing a new health consequence that has not be properly explored as yet. Several witnesses also pointed out that the effect of dietary advice to reduce overall fat consumption was to increase consumption of carbohydrates, primarily as processed foods, which can produce metabolic syndrome.

3. The Consequence of Obesity on Pregnancy

Increased rates of obesity in recent decades mean that there have been increasing numbers of pregnant women who are obese. The committee heard from Kristi Adamo, a researcher with the Healthy Active Living and Obesity Research Group at the Children's Hospital of Eastern Ontario, who talked about the intergenerational cycle of obesity. The risk of childhood obesity is increased by 30- 40% when women either enter pregnancy while overweight or obese, or when they gain excessive weight during pregnancy regardless of their pre-pregnancy weight.

Overweight and obese women are three times more likely to exceed the recommended weight gain guidelines during pregnancy than are healthy weight women, leading to the delivery of larger babies. Committee members were told that larger infants are more likely than healthy weight babies to become overweight children, who grow into overweight and obese adolescents. The cycle continues when these overweight young women become pregnant. The problem is further compounded when women do not get down to a healthy weight before the next pregnancy.

Jennifer Blake from the Society of Obstetricians and Gynaecologists of Canada explained that overweight and obese women as well as women who gain excessive weight during pregnancy, are at greater risk of adverse pregnancy outcomes such as hypertension, pre-term birth, miscarriage, stillbirth, gestational diabetes, higher Caesarean section rates and postpartum weight retention.

Witnesses discussed the proposed theory that the intrauterine environment of women who gain too much weight during pregnancy is altered and may result in epigenetic changes in the fetus' DNA. This refers to small chemical changes to the genetic material that affect the way it is read, leading to the increased risk of childhood overweight and obesity.

4. The Consequence of Socio-Economic Status on Health

As discussed above, witnesses who appeared before the committee did not draw a clear association between socio-economic status and obesity level. However, the prevalence of food insecurity among low-income households and the repeated assertion from witnesses that the unhealthiest of foods is often the cheapest, suggests that diet-related conditions may be more prevalent among this vulnerable group. In fact, the committee was told that the rate of Type 2 diabetes is three to five times higher among First Nations people compared to the general population in Canada.

5. The Consequence of Dietary Changes on Satiety

Satiety refers to the feeling of being full after eating. Several witnesses described the roles of the macronutrients, protein, fat and carbohydrates, in satiety. Specifically, James DiNicolantonio of St. Luke's Mid America Heart Institute explained that fat and protein are quite satiating while carbohydrates, particularly refined grains and free sugars, were described as less satiating, and can in fact cause a person to crave more. Generally speaking, the more satiating a food is the less of it a person is likely to eat.

As described above, starches and sugars are quickly emptied from the stomach. Consequently, they do not produce a feeling of being full for very long. Proteins and fats, on the other hand, remain in the stomach longer before being emptied into the small intestine. As a result, meals that are high in fat and protein are more satiating than high carbohydrate meals. The committee was told that high carbohydrate diets result in less satiety and therefore increased consumption.

6. The Consequence of Nutrition Labelling, Nutrient Content Claims and Health Claims

As described earlier in this report, Health Canada is responsible for regulating and enforcing nutrition labelling as well as nutrient content and health claims. While this is an important component of food regulation aimed at providing accurate information to the consumer while also preventing the dissemination of misinformation, the consequence is that this labelling can give the impression that a food is healthier than it really is.

Witnesses pointed out that the Nutrition Facts table, which has the admirable goal of presenting clear nutrition information on food packaging, is not required for the healthiest of foods – fresh and frozen fruits, vegetables and meats – but gives the impression of being healthy by simply listing the content of various macro and micronutrients. For example, the Nutrition Facts table of orange juice would indicate that it is high in vitamin C, but was described by one witness as not much better, nutritionally, than soft drinks, given the high sugar content. An orange, on the other hand, consumed as a whole fruit, contains more than the daily recommended amount of vitamin C but comes with the intrinsic fibre of the fruit, which lowers the glycemic load.

A number of witnesses criticized the practice of nutrient content and health claims. Terms such as “health halo” and “health washing” were used to describe the permitted use of these

claims on calorie-rich, nutrient poor foods. Overall, witnesses suggested that the consequence of labelling regulations has been to promote the consumption of unhealthier labelled food over the healthier, unlabelled food.

THE WAY FORWARD – A NATIONAL APPROACH

“It’s a national issue, a national crisis, and the federal government does have a very important leadership role to play within a collaborative context.”

Clifford Maynes, Green Communities Canada

In exploring ways for Canada to move forward and establish the means by which Canadians can return to healthier weights, many witnesses referred to Canada’s anti-smoking strategy. Despite the obvious distinction that smoking is a completely unnecessary practice while eating is essential, there are observations that can be made to help Canada find the way forward.

First, the anti-smoking strategy employed several different approaches implemented by different levels of government. Second, the evidence-base of the negative health consequences had to be elucidated and presented clearly to Canadians. Third, the strategy had to bring about a societal change in terms of how smoking was viewed. Fourth, the change in behaviour would take time. Fifth, the strategy would not be popular with the industry. And finally, the federal government provided the leadership for a pan-Canadian approach.

An OECD assessment of the cost-effectiveness of a variety of interventions including fiscal measures, advertising restrictions, labelling changes, media campaigns, school and workplace-based policy interventions, and physician counselling, suggests that investments are worthwhile. Members were surprised to hear from Franco Sassi of the OECD that the cost of implementing a comprehensive package of measures to counter obesity in Canada would be just \$33 per capita in Canada.

Repeatedly witnesses emphasized the need for a comprehensive, health-in-all-policies, whole-of-society approach under federal leadership and coordination, the impact of which would be greater than the sum of each individual component. The committee was told that policies, wherever possible, should encourage or facilitate the pursuit of healthy lifestyles. In this regard, witnesses suggested that a health lens, should be applied to a range of policy development, across departments and across all levels of government. An effective all-of-government platform would encourage the development of provincial and regional initiatives that promote healthy lifestyles. As such, the committee would like to see the federal government take aggressive measures to help Canadians achieve and maintain healthy weights.

Recommendation 1

The committee recommends that the federal government, in partnership with the provinces and territories and in consultation with a wide range of stakeholders, create and implement a National Campaign to Combat Obesity which includes goals, timelines and annual progress reports.

1. Advertising to Children

“It is ethically irresponsible to market unhealthy foods and beverages to children who are hardwired to trust us.”

Tom Warshawski, Childhood Obesity Foundation

With the exception of the food industry, witnesses unanimously supported strict controls on the advertising of unhealthy food and beverages to children, although the specifics of such an approach varied to some degree. Those witnesses who supported an advertising ban cited Quebec, which has had a prohibition on the advertising of all food and beverages to children under the age of 13 under its Consumer Protection Act¹¹ for many years. Some witnesses noted that this prohibition has been more successful in French-speaking Quebec where exposure is largely limited to media content that originates within the province. English-speaking Quebec is, to a greater extent, exposed to programming from the rest of Canada as well as outside of the country. Variations on the support for advertising restrictions included applying a prohibition to only unhealthy foods and beverages or only to sugary drinks. Witnesses noted the administrative burden of having to define the term “unhealthy” if the advertising ban applied only to that group of products.

The current situation in Canada is that the Canadian Radio-television and Telecommunications Commission requires broadcasters to adhere to the Broadcast Code for Advertising to Children which indicates that advertisers must not exploit the imaginative nature of children. In fact, Bill Jeffery of the Centre for Science in the Public Interest pointed out that the Supreme Court of Canada has said that advertising directly to children is inherently manipulative and advertising is essentially the legalized tricking of children.

Under the Broadcast Code for Advertising to Children, Advertising Standards Canada applies the industry-designed Canadian Children’s Food and Beverage Advertising Initiative (or the Children’s Advertising Initiative, CAI) which was launched by the food and beverage industry. The purpose of the CAI was to promote healthier dietary choices to children however, participation in the CAI is voluntary. There are currently 18 companies that participate in the CAI, but the committee was not told what proportion of the industry is represented by those companies.

All advertisements aimed at children must be pre-cleared through the Advertising Standards Canada’s (ASC) Children’s Clearance Committee. The ASC is an industry self-regulatory

¹¹ [Consumer Protection Act](#), CQLR, c. P-40.1, ss. 248–249.

body that monitors advertising. It is important to note that the media covered under the program go beyond traditional media. Janet Feasby of the Advertising Standards Canada informed the committee that the CAI applies to television, print, online, video and computer games, DVDs and G-rated rated movies, mobile media and word of mouth. Food industry representatives argued that compliance with the current voluntary code designed and enforced by the industry was a sufficient control on advertising to children.

As indicated above, several witnesses were supportive of additional controls on advertising aimed at children. They cited distrust of industry self-regulation, some research that has called the CAI ineffective, as well as the opinion that there would be no negative consequences to such a prohibition.

Recommendation 2

The committee recommends that the federal government:

- **Immediately conduct a thorough assessment of the prohibition on advertising food to children in Quebec; and,**
- **Design and implement a prohibition on the advertising of foods and beverages to children based on that assessment.**

2. Taxation and Other Fiscal Measures

Canada's Children's Fitness Tax Credit was described as a rare example of positive fiscal incentive to fight obesity. This tax credit was implemented in 2007 as a \$500 non-refundable tax credit for enrolling a child in eligible fitness programs. It was recently modified to a \$1,000 refundable tax credit. Although witnesses applauded the intention of this initiative to encourage parents to enroll their children in programs that provided physical activity, they suggested that its design results in little financial incentive. Rather, several people pointed out that parents who are likely to apply for the credit would have enrolled their children regardless and that they have the disposable income to afford the activities. They noted that even the recent changes to make the tax credit refundable does not help those families that do not have sufficient income to afford the initial output for sports activities.

Fiscal measures that were discussed frequently throughout the study were taxation of unhealthy foods and beverages and subsidies for healthy foods. The federal government collects \$3 billion annually from taxes placed on food, either through food service establishments or food retailers. In terms of food retailers, "basic groceries" are exempt from the Goods and Services Tax or Harmonized Sales Tax. Although the Basic Groceries Policy¹² appears to focus extra taxation on unhealthy foods like candy and snack foods, it still allows for some healthy foods to be taxed, such as individually prepared fresh salads, while other unhealthy foods are exempt, such as sugary breakfast cereal. It was suggested

¹² Canada Revenue Agency, [GST/HST Memoranda Series: 4.3 Basic Groceries](#), January 2007.

that the federal government examine this policy and implement tax reforms where appropriate to more effectively encourage consumption of healthy foods.

Witnesses named a number of countries that have brought in taxation on less healthy foods. France has brought in a tax on carbonated soft drinks, not only sugar-sweetened ones, but those artificially sweetened as well. This approach is to discourage people from migrating from sugary drinks to diet drinks, which is consistent with advice from the World Health Organization that says the long term effects of these sweeteners are still not known. As well, members heard that artificially sweetened products may actually increase the craving for sugar. One criticism that was raised regarding France's approach is that the new tax is not substantial enough to affect behaviour change.

A tax on sugary drinks has recently been implemented by Mexico and it will be monitoring whether this new tax results in consumers substituting sugary drinks for artificially sweetened ones. The committee was told that many countries are considering this approach but are awaiting an assessment of Mexico's experience.

A short-lived tax in Denmark on foods high in saturated fat was described as having had an impact from a health perspective, although it had only been in effect for a year before being cancelled following a change in government and strong opposition by the food industry. Finally, the committee heard that Hungary recently applied a tax on foods and beverages high in salt, sugar or caffeine. As a result of a 29% increase in cost there was a 27% drop in sales and 40% of food manufacturers introduced reformulated products. In addition, the revenues raised by this tax are re-invested in the public health budget.

With respect to new taxation policy, some witnesses advocated for added taxation of unhealthy foods and beverages generally while others suggested that the added taxation be limited to sugary drinks. All witnesses who supported taxation suggested that such a tax would have to be significant enough to change behaviour and many suggested that the revenue generated be used to promote healthy living or for healthcare. Criticism of the approach included the difficulty of implementation with respect to defining the term "unhealthy" and whether taxed beverages should include not only carbonated drinks but also fruit juices, sports drinks, etc., as well as artificially sweetened counterparts. In addition, it was noted that taxing unhealthy food broadly could have the effect of making the only affordable food choices for low-income people even less affordable.

The food industry spoke against the use of taxation suggesting that on its own it is unlikely to be effective. It should be noted that the committee heard from witness after witness that there is no one effective action that can be taken, but that several will be necessary. Phyllis Tanaka from Food and Consumer Products Canada suggested that taxation of unhealthy foods or beverages has proven to be of questionable success in other jurisdictions. Jim Goetz of the Canadian Beverage Association stated that taxation doesn't work and offered the example of the Manitoba government having studied the issue and dismissed it as being too arduous to administer.

One way to improve the affordability of healthy foods is to provide subsidies to certain industries. Although the committee did not hear about specific examples of food subsidies, it was told that taxation or subsidies that bring about a price increase or drop, respectively, of 10% would be expected to bring about a change in consumption of 2%. As noted above in the discussion of the federal government's Nutrition North Canada program, it is difficult to ensure that subsidies make their way to the consumer.

Some witnesses suggested that fiscal measures to reduce poverty would help to alleviate food insecurity and reduce unhealthy food choices. Steve Barnes, Director of Policy at the Wellesley Institute, pointed to the need for direct income supplements while Joe Gunn, Executive Director of Citizens for public Justice, spoke of the need for a living wage. With respect to income supplements, Valerie Tarasuk, a principal investigator with the University of Toronto's PROOF research program, stated that the federal government's Working Income Tax Benefit is not sufficient to bring people out of poverty and could be enhanced to target Canadians with the lowest incomes. Further, witnesses mentioned that other federal programs such as the Universal Child Care Benefit and Employment Insurance have the potential to be used as tools to address food insecurity, but are not currently having an impact in that respect.

Recommendation 3

The committee recommends that the federal government:

- **Assess the options for taxation levers with a view to implementing a new tax on sugar-sweetened as well as artificially-sweetened beverages; and,**
- **Conduct a study, and report back to this committee by December 2016, on potential means of increasing the affordability of healthy foods including, but not limited to, the role of marketing boards, food subsidies and the removal or reduction of existing taxes.**

Recommendation 4

The committee further recommends that the Indigenous and Northern Affairs Canada immediately:

- **Address the recommendations made by the Auditor General with respect to the Nutrition North program and report back to this committee on its progress by December 2016; and,**

Recommendation 5

The committee further recommends that the federal government conduct assessments of the Children’s Fitness Tax Credit, the Working Income Tax Benefit and the Universal Child Care Benefit with a view to determining how fiscal measures could be used to help Canadians of lower socio-economic status, including our Aboriginal population, choose healthy lifestyle options.

3. Food Guide

Several witnesses suggested that Canada’s food guide has been at best ineffective, and at worst enabling, with respect to the rising levels of unhealthy weights and diet-related chronic diseases in Canada.

Committee members heard that Brazil has recently issued a completely overhauled food guide which no longer focuses on food groups and nutrients but rather on whole foods, meal preparation and avoidance of ultra-processed items. Some witnesses encouraged this approach by pointing out that people don’t eat nutrients, they eat meals. The committee was told that the state of knowledge of our nutrient requirements may not be as good as we have been led to believe but that there is little debate that whole foods are healthier than processed foods. Certainly this is not advice that is being translated into the Canadian diet when over 60% of the foods purchased in this country are ultra-processed.¹³

The newly developed Brazilian food guide¹⁴ is based on only a few basic principles: diet is more than an intake of nutrients; dietary recommendations need to be tuned to their times; healthy diets derive from socially and environmentally sustainable food systems; different sources of knowledge inform sound dietary advice; and, dietary guidelines broaden autonomy in food choices. The guide provides advice on how to choose foods and prepare meals and offers suggestions for overcoming some of the obstacles in pursuing a healthy diet. The guide makes four recommendations alongside one “Golden Rule”.

¹³ Jean-Claude Moubarac et al., “Consumption of ultra-processed foods and likely impact on human health. Evidence from Canada,” *Public Health Nutrition*, volume 16, issue 12, December 2013, pp. 2240-2248.

¹⁴ Ministry of Health of Brazil, “[Dietary Guidelines for the Brazilian Population](#),” 2014.

Brazilian Dietary Guidelines

Golden Rule:

Always prefer natural or minimally processed foods and freshly made dishes and meals to ultra-processed foods.

Recommendation 1:

Make natural or minimally processed foods the basis of your diet.

Recommendation 2:

Use oils, fats, salt, and sugar in small amounts for seasoning and cooking foods to create culinary preparations.

Recommendation 3:

Limit the use of processed foods, consuming them in small amounts as ingredients in culinary preparations or as part of meals based on natural or minimally processed foods.

Recommendation 4:

Avoid ultra-processed foods.

The classification system for processed foods used in the Brazilian food guide was developed by Jean-Claude Moubarac, who is affiliated with the University of Montreal, and includes three groupings:

Group 1 is all unprocessed and minimally processed foods. This includes fresh fruits, vegetables, nuts, whole or polished grains, and meats as well as dairy products such as milk and yogurt.

Group 2 includes the processed ingredients used in cooking like vegetable oils, pasta, flour and products typically used to enhance the flavours of whole foods.

Group 3 is the ultra-processed food that includes ready-to-eat and ready-to-heat products. these foods are described as being manufactured with cheap ingredients and are high in calories, fat, sugar and salt while being low in fibre, vitamins, minerals and other healthful compounds found only native, whole foods.

Despite a lack of consensus among witnesses regarding how much fat, dairy, starch and sugar should be in the healthiest diet, all witnesses agreed that Canadians need to eat more whole foods, namely vegetables, fruit, nuts and meat and they need to stay away from highly processed foods. Witnesses pointed out that fruit juice is displayed as an item in the fruits and vegetables category in our food guide. However, it was pointed out that fruit juice is little more than a soft drink without the bubbles because it contains all the sugar from several pieces of fruit, none of the fibre and the vitamin content may be compromised due to the production methods used.

The committee was also told about recent dietary discussions in the United States which have resulted in the release of the 2015 report by the Dietary Guidelines Advisory Committee (DGAC). The U.S food guide, called the Dietary Guidelines for Americans, is jointly produced by the Department of Agriculture and the Department of Health and Human Services and is revised regularly every five years. These revisions rely on the DGAC reports which are produced following systematic review of the scientific literature with a view to provide evidence-based dietary recommendations. Health Canada has indicated that our food guide is revised on an “as needed basis.” The committee noted that 15 years passed between the 1992 food guide and the most recent 2007 version. Several witnesses also encouraged the “My Plate” approach used in the U.S. which provides advice on how to adhere to the dietary guidelines within the context of a balanced meal.¹⁵

The 2015 DGAC report acknowledges the lack of evidence to support the claim that dietary fat, particularly saturated fat and cholesterol, are linked to cardiovascular disease and recommends reversing decades of dietary advice by removing the upper limit for total fat consumption. The report also recommends a focus on the true drivers of diet-related disease – sugars and refined grain products.

Finally, members were told that food guides, although they may vary from country to country, too often reflect the financial interests of the dominant food businesses.

Recommendation 6

The committee recommends that the Minister of Health immediately undertake a complete revision of Canada’s food guide in order that it better reflect the current state of scientific evidence. The revised food guide must:

- **Be evidence-based;**
- **Apply meal-based rather than nutrient-based principles;**
- **Effectively and prominently describe the benefits of fresh, whole foods compared to refined grains, ready-to-eat meals and processed foods; and,**
- **Make strong statements about restricting consumption of highly processed foods.**

¹⁵ U.S. Department of Agriculture, [My Plate](#).

Recommendation 7

The committee further recommends that the Minister of Health revise the food guide on the guidance of an advisory body which:

- Comprises experts in relevant areas of study, including but not limited to nutrition, medicine, metabolism, biochemistry, and biology; and,
- Does not include representatives of the food or agriculture industries.

4. Nutrition Labelling

	% Daily Value
Fat / Lipides 3.0 g	5 %
Saturated / saturés 0.5 g + Trans / trans 0 g	3 %
Cholesterol / Cholestérol 0 mg	0 %
Sodium / Sodium 65 mg	3 %
Carbohydrate / Glucides 15 g	5 %
Fibre / Fibres 1 g	4 %
Sugars / Sucres 1 g	
Protein / Protéines 1 g	
Vitamin A / Vitamine A	
Vitamin C / Vitamine C	
Calcium / Calcium	

As mentioned above, there was unanimous agreement among witnesses that a healthy diet is composed primarily of whole foods used in freshly prepared meals. While several witnesses noted that the healthiest food choices do not require a label, they described changes that should be implemented to better reflect the “healthfulness” of prepackaged and processed foods.

i. Nutrition Facts table

“Our nutrition facts panels are so confusing and unwieldy that our government has launched not one but two campaigns designed to help Canadians understand how to use them.”

Yoni Freedhoff, Bariatric Medical Institute

The Nutrition Facts table provides information about the food’s energy content (calories) as well as total fat, saturated plus trans fat, total carbohydrates, fibre, sugars, total protein, cholesterol, sodium, calcium and vitamins A and C. All required micronutrients must be presented as a percent of daily recommended intake, but only total fat and carbohydrate must be presented this way in addition to providing the total weights for these macronutrients. That is to say, the food regulations do not require that protein content be expressed as a percent of daily intake. The U.S. Institute of Medicine, which is responsible for establishing intake values, recommends daily intake of protein of 10-30% of total calories. Another requirement is that fibre and sugar must be provided as

components of total carbohydrate. Fibre must be presented as total weight and as a percent of daily intake. Sugar need only be provided as total weight.

In terms of total carbohydrates, members question the percent daily value that Health Canada has attached to this macronutrient. As described above, starch and sugar are fat promoting in three ways: they inhibit the breakdown of body fat as an energy source; they induce the synthesis of body fat; and, are not satiating and therefore contribute to overeating. In other words, not all calories are the same, since the calories from carbohydrates contribute more to weight gain than the calories from fat and protein.

Committee members were told about recently released guidance from the World Health Organization about sugar consumption. The new recommendations acknowledge the difference between intrinsic sugar in whole fruits, vegetables and dairy compared to the free sugars of fruit juices and processed foods, as was described to this committee by some witnesses. As such, the World Health Organization recommends that no more than 10% of total calories come from free sugars.¹⁶ It does not recommend a limit on the intrinsic sugars of whole foods.

In addition, the Nutrition Facts table must include saturated fat plus trans fat as a percent of daily intake. Committee members question this pairing given the emerging consensus that saturated fat appears not to be associated with the negative health effects that it has long been thought to provoke. Conversely, there is scientific consensus regarding the negative health effects of industrially produced trans fat¹⁷ and the World Health Organization has declared that there is no safe consumption level of this compound. The committee notes the recent decision in the United States to remove partially hydrogenated oils, the source of industrially-produced, or artificial, trans fat, from their Generally Recognized as Safe (GRAS) list.¹⁸ The GRAS list includes substances that are permitted to be intentionally added to foods.¹⁹

The committee applauds Health Canada's recently published proposed regulatory amendments to the Nutrition Facts requirements. On June 13, 2015, Health Canada published proposed regulations to require that sugar content be presented as a percent daily value as well as total weight.²⁰ The recommended daily value for total sugar intake is proposed to be 100 grams. This is not directly comparable to the World Health Organization's recommendation on sugar intake since that addresses only free sugars; however 100g converts to 400 calories, which is 20% of a 2,000 calorie daily intake. The

¹⁶ World Health Organization, "[Guideline: Sugars intake for adults and children](#)," 2015.

¹⁷ Naturally occurring trans fat is produced in the stomach of ruminants such as cows, goats and sheep and is present in small amounts in the meat and dairy produced from these animals. It is not believed to be associated with negative health effects.

¹⁸ U.S. Food and Drug Administration (FDA), "[FDA Cuts Trans Fat from Processed Foods](#)," June 2015.

¹⁹ FDA, [Generally Recognized as Safe](#).

²⁰ Canada Gazette, "[Regulations Amending the Food and Drug Regulations — Nutrition Labelling, Other Labelling Provisions and Food Colours](#)," June 13, 2015.

committee notes that the sugar in most of the foods that require a Nutrition Facts table will be free sugars. Finally, the committee acknowledges that Health Canada has included regulatory proposals for changes to serving size listings on Nutrition Facts tables by using regulated reference amounts reflective of a typical serving. The proposals would require that multi-serving prepackaged foods list individual serving sizes that better reflects current consumption patterns and that allow easier comparisons among similar products.

Recommendation 8

The committee therefore recommends that the Minister of Health prohibit the use of partially hydrogenated oils, to minimize trans fat content in food, unless specifically permitted by regulation.

Recommendation 9

The committee further recommends that the Minister of Health:

- **Reassess the daily value applied to total carbohydrates based on emerging evidence regarding dietary fat and the fat promoting nature of carbohydrates;**
- **Ensure that the regulatory proposals for serving size have addressed all of the concerns raised by stakeholders during public consultation, and,**
- **Require that the daily intake value for protein be included in the Nutrition Facts table.**

Recommendation 10

The committee further recommends that the Minister of Health assess whether sugar and starch should be combined under the heading of total carbohydrate within the Nutrition Facts table and report back to this committee by December 2016.

ii. Ingredient listing

“There are 56 different names for sugar and they are not added up and listed as a total, at the top of the ingredient list.”

Anna Issakoff-Meller, physician

The committee also applauds Health Canada’s proposed regulation to require that all sugars-based ingredients be grouped together in the ingredient listing. This change in requirements for ingredient listing should help consumers understand the extent to which prepared foods contain added sugar.

iii. Health and Nutrient Content Claims

“A product labelled “lower fat” may still have a relatively high fat content, or contain high levels of other potentially unhealthy ingredients such as sugar and sodium.”

Canadian Medical Association, written submission

Witnesses were not supportive of the current regulatory framework pertaining to the claims that food producers can put on their products, particularly those that are highly processed and are of low nutritional value. In addition to their use on the front of food packaging, the committee was also made aware that these health and nutrient content claims are used in advertisements. Some witnesses claimed that this opened the door to providing misleading information about unhealthy foods.

The committee is disappointed that the recently proposed regulatory changes do not include changes that would address the “health halo” that health claims can put on unhealthy foods. Rather, the only change proposed regarding claims is that prepackaged fresh fruits and vegetables can include one of the permitted health claims without a requirement to include a Nutrition Facts table, which is normally necessary in prepackaged foods.

Recommendation 11

The committee therefore recommends that the Minister of Health implement strict limits on the use of permitted health claims and nutrient content claims based on a measure of a food’s energy density relative to its total nutrient content.

iv. Front-of-Package Labelling

“Having so many different kinds of labels adds to the confusion. Having one simple, government endorsed system will help take away some of that difficulty.”

Joelle Walker, Canadian Cancer Society

Numerous witnesses urged the implementation of a standardized front-of-package labelling system in Canada. They indicated that the Nutrition Facts table is too confusing and that a simpler way of identifying healthier food choices is required. Committee members were offered some observations about approaches to this category of nutrition labelling in the United Kingdom, United States and Sweden.

The United Kingdom has implemented a voluntary traffic light labelling system on the front of foods. Green denotes a healthy choice that can be eaten with restriction, yellow suggests a somewhat less healthy option that should be consumed less frequently and red indicates a food that is nutrient-poor and should be consumed only occasionally. The traffic light system takes into account salt, total fat, saturated fat and sugar content.²¹ Members were told that this approach has resulted in food manufacturers reformulating their products in order improve the nutrient content.

²¹ Food Standards Agency (UK), [“Using traffic lights to make healthier choices”](#) 2007.

In the United States, the NuVal® Nutritional Scoring System was developed at Yale University. Also voluntary, this system assigns a single numeric value between 1 and 100 to a food to denote its nutritional value, taking into account over 30 nutrients and nutrition factors. This approach is not technically a front-of-package approach. Rather, the symbol appears on the shelf price tag of participating retailers. This approach has the benefit of applying to unpackaged whole foods.²² In Sweden, a simple green symbol is added to the front of packaging of foods that have been assessed as “healthy”.

One of the proposals made during this study was that prepackaged foods should be required to include a claim on the front of the packaging clearly indicating whether the food contains added sugar. Committee members also heard that in the absence of standardized, mandatory front-of-package labelling, food manufacturers are developing their own versions. This approach, coupled with the permitted health and nutrient content claims, results in highly processed foods being portrayed as healthier choices than they really are.

Recommendation 12

The committee therefore recommends that the Minister of Health:

- **Immediately undertake a review of front-of-package labelling approaches that have been developed in other jurisdictions and identify the most effective one;**
- **Report back to this committee on the results of the review by December 2016;**
- **Amend the food regulations to mandate the use of the identified front-of-package approach on those foods that are required to display a Nutrition Facts table; and,**
- **Encourage the use of this labelling scheme by food retailers and food service establishments on items not required to display a Nutrition Facts table.**

Finally, the committee was told by several witnesses that nutrition labelling in some form should be extended to the meals and snacks purchased from food service establishments. Witnesses testified that restaurant meals and take out foods are sufficiently standardized that nutrition labelling would not be overly arduous.

²² NuVal, [How it Works](#).

Recommendation 13:

The committee therefore recommends that the Minister of Health encourage nutrition labelling on menus and menu boards in food service establishments.

5. Healthy Active Lifestyle Promotion



“Adopting Canada’s physical activity guidelines has a benefit that is equal to or greater than stopping smoking.”

Jonathon Fowles, Exercise is Medicine Canada

Although there was a consensus among most witnesses that physical activity is not a significant means of weight maintenance, witnesses agreed that it is an essential tool for health maintenance. The committee was told that research shows that interventions can be effective in promoting physical activity. Witnesses described multiple initiatives that have been undertaken across Canada to get, and keep, Canadians active.

The committee was told by the Public Health Agency of Canada (PHAC) that traditional awareness-based approaches for healthy active living have not been successful. As such, it has adopted innovative, multi-sectoral approaches that include collaboration with provincial and territorial governments, not-for-profit organizations as well as the private sector to promote healthy living. Several of the initiatives that the committee heard about involved funding from PHAC which required matched funding from the private sector.

For example, PHAC’s Play Exchange program called for the submission of ideas from across Canada on how to promote an active lifestyle. Out of this initiative, Trottibus/The Walking School was awarded \$1 million. This initiative aims to encourage more children to walk to school. Another example presented to the committee was a pilot project designed by YMCA Canada that takes advantage of Canada’s high rate of use of loyalty cards called “Air Miles for Social Change.” This program incentivizes members with Air Miles Reward Miles for reaching specific physical activity goals. Despite this innovative approach, the committee was told that the risk of funding pilot programs is that they just get started as the funding ends and then PHAC runs new competitions and new pilot programs begin. For example,

Mark Tremblay of Healthy Active Living and Obesity Research Group revealed that Healthy Active Kids Canada has closed down due to loss of funding and that another program, designed to pursue the same goals, will get funding and will have to restructure what Healthy Active Kids Canada had already accomplished. As such, some witnesses called for better assessment of funded programs with sustained funding awarded to those that show promise.

The committee also heard about the health benefits of walking and how it is being promoted by Green Communities Canada under its Canada Walks program. Walking was described as an intervention with the greatest potential at the population level to have an impact on health, obesity and physical inactivity. Specifically, members were told that walking burns more fat than jogging, improves heart health and blood pressure, reduces the risk of colon cancer, Type 2 diabetes, Alzheimer's disease and glaucoma while also improving mental fitness and school performance.



In a broader context, several witnesses discussed the need to promote active transportation. This refers not only to walking, cycling, or other means of personal active transportation but also to public transportation which is accompanied by some level of walking or cycling to and from boarding stops. Witnesses spoke of the need to invest more in infrastructure and community design in order to build walkable communities and encourage active transportation.

Several witnesses discussed the role of schools in promoting healthy lifestyles to children. School breakfast and lunch programs, nutrition and cooking classes, and placing greater value on physical education were just some of the suggestions for teaching our children the importance of eating properly and remaining physically active.

The physical activity and sedentary guidelines were described earlier in this report. The committee was told that a Canadian 24 hour Movement Behaviour Guideline for Children and Youth is being developed. This will provide a single guideline about how much sleep and physical activity and how little sedentary behaviour children and youth should get each day.

Some witnesses discussed the role of physicians in promoting healthy lifestyles. Members heard that an assessment of interventions by the OECD revealed that physician counselling is the most effective intervention in terms of affecting diet and physical activity behaviours. As well, a key initiative of the Canadian Society for Exercise Physiology was the creation of Exercise is Medicine Canada. The goal of this program is to integrate physical activity as part of the prevention and treatment of chronic disease by encouraging physicians to write prescriptions for exercise to their patients. However, many witnesses indicated that getting physicians to incorporate healthy active lifestyle promotion into their patient interactions begins with early exposure during their studies and that training must continue throughout their career.

In some provinces coalitions of stakeholder groups have joined forces to form healthy living alliances. For example the British Columbia Healthy Living Alliance (BCHLS) is an alliance of non-governmental organizations dedicated to healthy living and chronic disease prevention. As a result of this alliance, several initiatives have been implemented in BC such as the “Sip Smart” and “Screen Smart” initiatives to reduce the consumption of sugary drinks and reduce sedentary time, respectively. In addition, BC has implemented a provincial physical activity strategy.

In Quebec, the organization Quebec en Forme was created in 2002 with a mandate to promote good eating habits and active lifestyles to the province’s children. Quebec en Forme has recruited 164 communities around the province, including 30 Inuit, Cree and First Nation communities, which has resulted in 17 regional action plans and 5,500 projects involving 4,000 partner organizations.

Chronic Disease Prevention and Alliance Canada (CDPAC), which is an alliance of 12 national health organizations, works to tackle the root causes of chronic disease, which include poor diet and physical inactivity. Craig Larsen, Executive Director of CDPAC, told the committee that a health lens needs to be applied when developing policies that are aimed at affecting food choices and physical activity behaviour.

The committee heard that ParticipAction has modified its business model from one of public awareness campaigns to one of supporting Canadians to adopt a more active lifestyle. In this regard, members were told about a national physical activity strategy called Active Canada 20/20 that was similar in nature and scope as the 2012 Canadian Sport Policy that was endorsed by the federal, provincial and territorial governments. A national physical activity strategy would emphasize the importance of meeting the physical activity guidelines as well as the sedentary guidelines. Witnesses explained that work is no longer proceeding on Active Canada 20/20 due to loss of funding from the federal government. In fact, federal funding for ParticipACTION was cut by more than half from \$4.5 million to \$2.0 million in the fiscal year 2014-2015. The committee was told that for this program to proceed and to have impact it needs to have government as a partner.

In terms of infrastructure costs associated with creating healthy, active neighbourhoods and walkable communities, the committee notes the New Building Canada Fund launched in 2014.²³ The fund provides funding over ten years for national, regional and community-level infrastructure projects.

Recommendation 14

The committee therefore recommends that the federal government increase funding to ParticipACTION to a level sufficient for the organization to:

- **Proceed with Active Canada 20/20; and**
- **Become the national voice for Canada’s physical activity messaging.**

Recommendation 15

The committee further recommends that the Minister of Health and the Minister of Sport and Persons with Disabilities together use the recently established National Health and Fitness Day to promote the Canadian Physical Activity Guidelines.

Recommendation 16

The committee further recommends that the Public Health Agency of Canada provide sustained or bridged funding for pilot projects that have been assessed as effective.

Recommendation 17

The committee further recommends that the Minister of Health in discussion with provincial and territorial counterparts as well as non-governmental organizations already engaged in these initiatives:

- **Encourage improved training for physicians regarding diet and physical activity;**
- **Promote the use of physician counselling, including the use of prescriptions for exercise;**
- **Bridge the gap between exercise professionals and the medical community by preparing and promoting qualified exercise professionals as a valuable part of the healthcare system and healthcare team;**
- **Address vulnerable populations, such as Canadians of lower socio-economic status including Canada’s Aboriginal population, and pregnant women;**
- **Advocate for childcare facility and school programs related to breakfast and lunch programs, improved physical education, physical activity and nutrition literacy courses; and,**

²³ Infrastructure Canada, [*The New Building Canada Fund: Focusing on economic growth, job creation and productivity.*](#)

- **Engage provincial governments in discussions about infrastructure requirements for communities that encourage active transportation and active play.**

Recommendation 18

The committee further recommends that the federal government provide funding under the New Building Canada Fund to communities for infrastructure that enables, facilitates and encourages an active lifestyle, both indoors and outdoors.

6. Research and Knowledge Transfer

“We have to look at the barriers or the enablers for those populations and then make it useful for them and provide the knowledge.”

Christine Cameron, Canadian Fitness and Lifestyle Research Institute

The committee heard that the Canadian Institutes for Health Research (CIHR), under several of its institutes, make significant funding available for obesity related research. In fact, several of the witnesses invited to appear during this study are recipients of CIHR funding. Committee members were told that CIHR has invested \$259 million between 2006-07 and 2013-14, with funding levels increasing by 30% over this time period. Given the complexity of the obesity issue and the range of areas for policy-making in this respect, investment in research is essential to help identify effective intervention and prevention strategies. CIHR-funded research spans multiple areas including school-based initiatives, the built environment, impact of calorie labelling on menus, health equity for Aboriginal populations, impact of income supplements, and bariatric care. CIHR also sponsors the annual Canadian Obesity Summit. The Canadian Fitness and Lifestyle Research Institute makes a significant contribution through its assessment of interventions and their effectiveness at promoting physical activity.

With respect to knowledge transfer the committee was told about PHAC’s Best Practices Portal. This portal is an online platform for promising practices along the whole spectrum of healthy living promotion that can then be accessed by stakeholders across the country. While this seems to be a promising initiative that can help to disseminate knowledge about healthy living promotion, the committee notes that it only heard about it during its meeting with departmental representatives.

Recommendation 19

The committee therefore recommends that the Public Health Agency of Canada implement a strategy to increase the visibility, uptake and use of the Best Practices Portal by stakeholders across the country.

7. Public Awareness and Education

“Education is necessary but not sufficient.”

Robert Lustig, University of California, San Francisco

While several food industry representatives suggested that the only government intervention needed to combat the rising rates of obesity is public awareness, or education, most witnesses agreed that it is necessary, but not sufficient, in any approach to promoting healthy weights. Members heard a unanimous call for simple messaging preferably delivered by a trusted name. One thing that became apparent during the study is that the federal government is not investing in public awareness campaigns. In fact, PHAC clearly stated that traditional awareness-based approaches are not producing desired results. However, it also became very clear that there are numerous individuals, organizations and coalitions across Canada that are more than equipped to take up the messaging responsibility given adequate levels of funding should the government not want to accept this role. ParticipACTION revealed that it has over 5,000 organizations as part of its network.

Recommendation 20

The committee therefore recommends that Health Canada design and implement a public awareness campaign on healthy eating based on tested, simple messaging. These messages should relate to, but not be limited to:

- **Most of the healthiest food doesn't require a label;**
- **Meal preparation and enjoyment;**
- **Reduced consumption of processed foods; and,**
- **The link between poor diet and chronic disease.**

Recommendation 21

The committee further recommends that Health Canada and other relevant departments and agencies, together with existing expertise and trusted organizations, implement a comprehensive public awareness campaign on healthy active lifestyles.

CONCLUSION

Despite the efforts of governments and non-governmental organizations over the past several years, obesity rates have continued to climb in Canada. Given the associated health implications of excess body weight, it is imperative that this country embark on a more comprehensive and collaborative approach to address this very complex problem.

As such, the federal government must take a leadership role in implementing a long-term, multi-pronged, multi-sectoral campaign if we are serious about getting Canadians to pursue healthier, more active lifestyles. This strategy may require many years before measurable results can be identified, much like the anti-smoking strategy.

Extensive testimony throughout the course of this study revealed the extent of this health issue that touches almost everybody in this country. This report has identified several actions that must be embraced by all levels of government as well as non-governmental organizations. This committee looks forward to the implementation of these recommendations so that Canada can get back to healthy weights.

APPENDIX A – LIST OF RECOMMENDATIONS

Recommendation 1

The committee recommends that the federal government, in partnership with the provinces and territories and in consultation with a wide range of stakeholders, create and implement a National Campaign to Combat Obesity which includes goals, timelines and annual progress reports.

Recommendation 2

The committee recommends that the federal government:

- Immediately conduct a thorough assessment of the prohibition on advertising food to children in Quebec; and,
- Design and implement a prohibition on the advertising of foods and beverages to children based on that assessment.

Recommendation 3

The committee recommends that the federal government:

- Assess the options for taxation levers with a view to implementing a new tax on sugar-sweetened as well as artificially-sweetened beverages; and,
- Conduct a study, and report back to this committee by December 2016, on potential means of increasing the affordability of healthy foods including, but not limited to, the role of marketing boards, food subsidies and the removal or reduction of existing taxes.

Recommendation 4

The committee further recommends that the Indigenous and Northern Affairs Canada immediately:

- Address the recommendations made by the Auditor General with respect to the Nutrition North program and report back to this committee on its progress by December 2016; and,

Recommendation 5

The committee further recommends that the federal government conduct assessments of the Children's Fitness Tax Credit, the Working Income Tax Benefit and the Universal Child Care Benefit with a view to determining how fiscal measures could be used to help Canadians of lower socio-economic status, including our Aboriginal population, choose healthy lifestyle options.

Recommendation 6

The committee recommends that the Minister of Health immediately undertake a complete revision of Canada's food guide in order that it better reflect the current state of scientific evidence. The revised food guide must:

- Be evidence-based;
- Apply meal-based rather than nutrient-based principles;
- Effectively and prominently describe the benefits of fresh, whole foods compared to refined grains, ready-to-eat meals and processed foods; and,
- Make strong statements about restricting consumption of highly processed foods.

Recommendation 7

The committee further recommends that the Minister of Health revise the food guide on the guidance of an advisory body which:

- Comprises experts in relevant areas of study, including but not limited to nutrition, medicine, metabolism, biochemistry, and biology; and,
- Does not include representatives of the food or agriculture industries.

Recommendation 8

The committee therefore recommends that the Minister of Health prohibit the use of partially hydrogenated oils, to minimize trans fat content in food, unless specifically permitted by regulation.

Recommendation 9

The committee further recommends that the Minister of Health:

- Reassess the daily value applied to total carbohydrates based on emerging evidence regarding dietary fat and the fat promoting nature of carbohydrates;
- Ensure that the regulatory proposals for serving size have addressed all of the concerns raised by stakeholders during public consultation, and,
- Require that the daily intake value for protein be included in the Nutrition Facts table.

Recommendation 10

The committee further recommends that the Minister of Health assess whether sugar and starch should be combined under the heading of total carbohydrate within the Nutrition Facts table and report back to this committee by December 2016.

Recommendation 11

The committee therefore recommends that the Minister of Health implement strict limits on the use of permitted health claims and nutrient content claims based on a measure of a food's energy density relative to its total nutrient content.

Recommendation 12

The committee therefore recommends that the Minister of Health:

- Immediately undertake a review of front-of-package labelling approaches that have been developed in other jurisdictions and identify the most effective one;
- Report back to this committee on the results of the review by December 2016;
- Amend the food regulations to mandate the use of the identified front-of-package approach on those foods that are required to display a Nutrition Facts table; and,
- Encourage the use of this labelling scheme by food retailers and food service establishments on items not required to display a Nutrition Facts table.

Recommendation 13

The committee therefore recommends that the Minister of Health encourage nutrition labelling on menus and menu boards in food service establishments.

Recommendation 14

The committee therefore recommends that the federal government increase funding to ParticipACTION to a level sufficient for the organization to:

- Proceed with Active Canada 20/20; and
- Become the national voice for Canada's physical activity messaging.

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- Encourage improved training for physicians regarding diet and physical activity;
- Promote the use of physician counselling, including the use of prescriptions for exercise;
- Bridge the gap between exercise professionals and the medical community by preparing and promoting qualified exercise professionals as a valuable part of the healthcare system and healthcare team;
- Address vulnerable populations, such as Canadians of lower socio-economic status including Canada's Aboriginal population, and pregnant women;
- Advocate for childcare facility and school programs related to breakfast and lunch programs, improved physical education, physical activity and nutrition literacy courses; and,
- Engage provincial governments in discussions about infrastructure requirements for communities that encourage active transportation and active play.

Recommendation 18

The committee further recommends that the federal government provide funding under the New Building Canada Fund to communities for infrastructure that enables, facilitates and encourages an active lifestyle, both indoors and outdoors.

Recommendation 19

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- Meal preparation and enjoyment;
- Reduced consumption of processed foods; and,
- The link between poor diet and chronic disease.

Recommendation 21

The committee further recommends that Health Canada and other relevant departments and agencies, together with existing expertise and trusted organizations, implement a comprehensive public awareness campaign on healthy active lifestyles.

APPENDIX B – LIST OF WITNESSES

Wednesday, October 29, 2014	
Canadian Obesity Network	Ian Janssen, Chair, Science Committee
Childhood Obesity Foundation	Dr. Tom Warshawski, Chair
Thursday, October 30, 2014	
Health Law Institute, University of Alberta	Timothy Caulfield, Canada Research Chair
Preventive Cardiology, Saint Luke's Mid America Heart Institute	James DiNicolantonio, Doctor of Pharmacy and Cardiovascular Research Scientist
Thursday, January 29, 2015	
Canadian Nutrition Society	Angelo Tremblay, Advisory Committee Member
Dietitians of Canada	Pat Vanderkooy, Manager, Public Affairs
As an Individual	Vladimir Vuksan, Professor, Department of Nutritional Sciences and Medicine, University of Toronto
Wednesday, February 4, 2015	
CHEO Research Institute	Kristi Adamo, Scientist, Healthy Active Living and Obesity Research Group
As an Individual	Dr. William Flanders, Professor, Department of Epidemiology, Rollins School of Public Health, Emory University
Thursday, February 5, 2015	
Centre for Science in the Public Interest	Bill Jeffery, National Coordinator
As an Individual	Dr. Robert Lustig, Professor, University of California, San Francisco
Wednesday, February 18, 2015	
As individuals	Carolyn Gotay, Professor, School of Population and Public Health, University of British Columbia Laurie Twells, Associate Professor, Faculty of Medicine, School of Pharmacy, Memorial University of Newfoundland

Thursday, February 19, 2015	
Food Processing and Consumer Products Council	Sylvie Cloutier, President and CEO
Restaurants Canada	Joyce Reynolds, Executive Vice-President, Government Affairs
Food and Consumer Products of Canada	Phyllis Tanaka, Senior Advisor, Food and Nutrition, Public and Regulatory Affairs
Food Processing and Consumer Products Council	Annick Van Campenhout, Chief Executive Officer, Council for Food Progress Initiatives
Wednesday, February 25, 2015	
Canadian Beverage Association	Jim Goetz, Chair
Canadian Sugar Institute	Sandra Marsden, President
Salt Institute	Morton Satin, Vice-president
Canadian Sugar Institute	Flora Wang, Manager, Nutrition and Scientific Affairs
Thursday, February 26, 2015	
YMCA Canada	Scott Haldane, President and CEO Jennie Petersen, General Manager, Wellness Program, YMCA Calgary
Green Communities Canada, Canada Walks	Clifford Maynes, Executive Director
Wednesday, April 23, 2015	
Assembly of First Nations	Katie-Sue Derejko, Senior Policy Analyst, Public Health Peter Dinsdale, Chief Executive Officer Brigitte Parent, Policy Analyst Jennifer Robinson, Senior Policy Analyst
Wednesday, May 6, 2015	
Canadian Paediatric Society	Dr. Catherine Pound, Nutrition and Gastroenterology Committee Member
Canadian Cardiovascular Society	Dr. Heather Ross, President
Thursday, May 7, 2015	
Society of Obstetricians and Gynaecologists of Canada	Dr. Jennifer Blake, Chief Executive Officer
Canadian Association of Bariatric Physicians and Surgeons	Dr. Robert Dent, Physician
Wednesday, May 13, 2015	
Heart and Stroke Foundation of Canada	Manuel Arango, Director, Health Policy
Canadian Diabetes Association	Dr. Jan Hux, Chief Science Officer
Canadian Cancer Society	Joelle Walker, Senior Manager, Public and International Affairs

Thursday, May 14, 2015	
Canadian Fitness and Lifestyle Research Institute	Dr. Christine Cameron, President
Healthy Active Living and Obesity Research Group - CHEO Research Institute	Mark Tremblay, Director
Wednesday, May 27, 2015	
Wellesley Institute	Steve Barnes, Director of Policy
Citizens for Public Justice	Joe Gunn, Executive Director
PROOF	Valerie Tarasuk, Principal Investigator, Professor, Nutritional Sciences, University of Toronto
Thursday, May 28, 2015	
BC Healthy Living Alliance	The Honourable Mary Collins, P.C., Director of the Secretariat
Exercise is Medicine Canada	Jonathon Fowles, Core Faculty
As an Individual	Nina Teicholz, Investigative Journalist and Author, The Big Fat Surprise
Wednesday, June 3, 2015	
Chronic Disease Prevention Alliance of Canada	Craig Larsen, Executive Director Manuel Arango, Member, Board of Directors
QUÉBEC EN FORME	Sylvain Deschênes, Director, Mobilization, Mobilization and Knowledge Transfer Management
Thursday, June 4, 2015	
Organisation for Economic Co-operation and Development)	Franco Sassi, Senior Health Economist, Health Division
Wednesday, June 10, 2015	
As individuals	Dr. Yoni Freedhoff, Assistant Professor, Department of Family Medicine, Medical Director, BMI, University of Ottawa Dr. Anna Issakoff-Meller
Thursday, June 11, 2015	
Advertising Standards Canada	Janet Feasby, Vice-president, Standards
Canadian Radio-television and Telecommunications Commission	Scott Hutton, Executive Director , Broadcasting
Canadian Radio-television and Telecommunications Commission	Nanao Kachi, Director, Social and Consumer Policy
Association of Canadian Advertisers	Ron Lund, President and CEO

Wednesday, June 17, 2015	
ParticipACTION	Elio Antunes, President and CEO
Canadian Society for Exercise Physiology	Kirstin Lane, Core Faculty and Member of Special Projects Task Force
Thursday, June 18, 2015	
Canadian Institutes of Health Research	Dr. Jane Aubin, Executive Vice-President, Chief Scientific Officer
Statistics Canada	Josée Bégin, Director, Health Statistics Division Julie Bernier, Director, Health Analysis Division
Public Health Agency of Canada	Rodney Ghali, Director General, Centre for Chronic Disease Prevention
Health Canada	Dr. Hasan Hutchinson, Director General, Office of Nutrition Policy and Promotion Dr. William Yan, Director, Food Directorate