

Board of Health

From: Anita Krajnc <anita.krajnc@gmail.com>
Sent: May 26, 2024 11:49 PM
To: Board of Health; Councillor Moise; Councillor Bravo; Councillor Malik; Councillor Morley; Councillor Perks
Subject: [External Sender] deputation to Board of Health
Categories: Communication

Re:

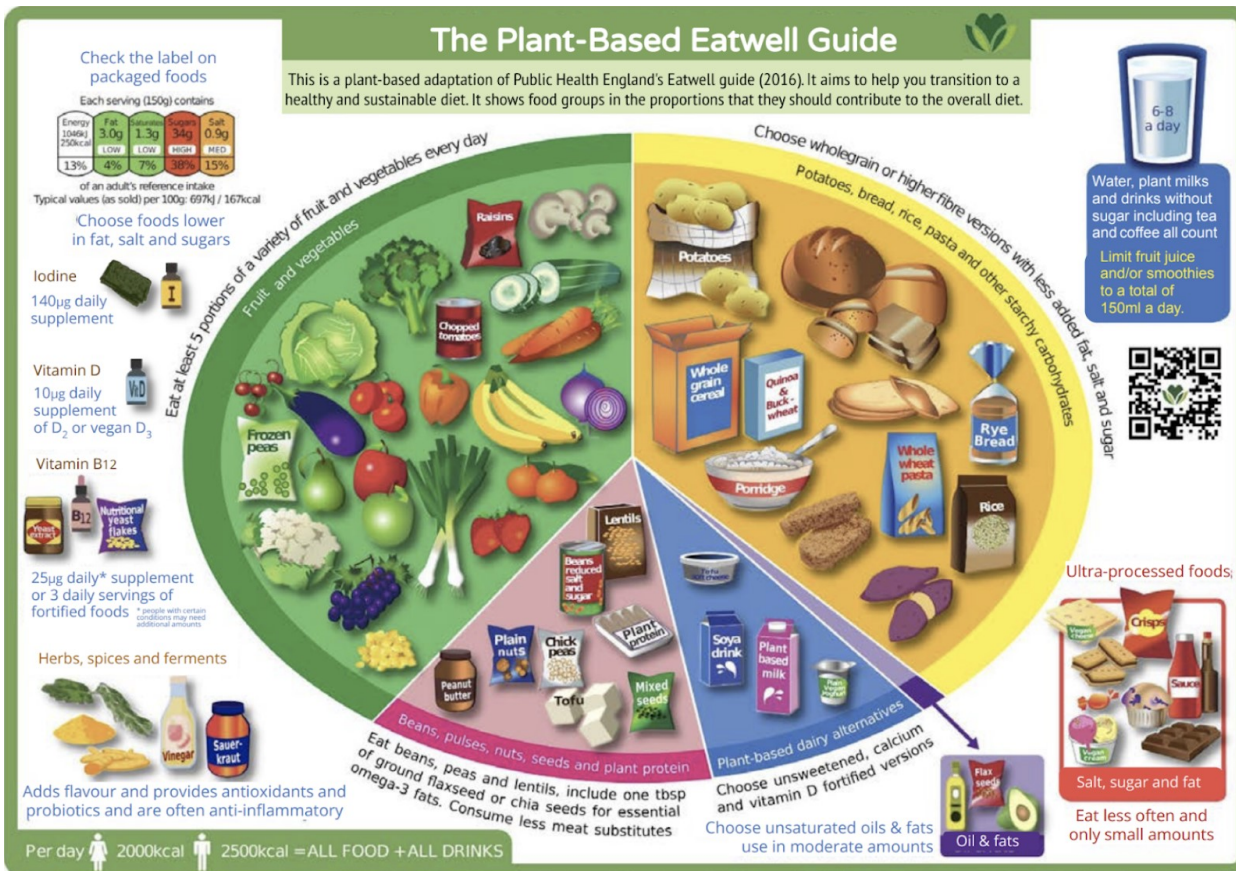
[HL13.4 - 2024 Student Nutrition Program Service Subsidies](#) on the agenda: please add: the recommendation includes that the nutritious meals are fully plant based

Dear City of Toronto Board of Health,

I am writing to the Board of Health to share information on the value of a plant based diet for student nutrition, planetary health and cost savings. I also am writing to ask the Board and the city councilors on the Board who have not yet done so, to please endorse the Plant Based Treaty <https://plantbasedtreaty.org/endorse/> and to present a motion to City council asking the city to endorse the treaty and to promote plant based menu changes in shelters, retirement homes and early childhood learning centres.

I would like to share a report Dr. Zahra Kassam did for the Plant Based Treaty for our meeting with Brampton councilors earlier this year (please see below). A new OHIP covered, Aroga Lifestyle Medicine clinic opened in Brampton where physicians can refer their patients to lifestyle medicine advice, including whole food plant based nutrition (this would be good to have in Toronto too). If the Board or councilors want more information, Dr. Zahra Kassam would be happy to speak to you directly. Please note Dr. Kassam is lead organizer of the Plant Based Nutrition conference in Canada (this year's conference was held on Saturday, May 25 in Toronto).

Given the critical role of plant based foods in preventing as well as reversing chronic diseases, the Board of Health should recommend going beyond the Canada Food Guide and choosing the optimal entirely plant based diet. It is possible to eat a healthy plant-based diet at all stages of life. The UK Plant Based Health professionals (founded by Dr. Zahra Kassam's sister Dr. Shireen Kassam) have demonstrated how this would look on their "Plant-based Eatwell Guide". The Guide shows the proportions in which foods from different food groups are needed to achieve a balanced and healthy diet from ages 1 and above. It states people should: "Eat at least 5 portions of a variety of fruits and vegetables a day but aim for more, as eating up to 10 portions a day has additional benefits for health", double what WHO suggests.



Yours truly,
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Dr. Zahra Kassam's report:

Overview:

- A) There is an increasing burden of chronic disease in Canada, including in children
- B) Ill health has negative consequences on the Canadian economy
- C) Diet is the leading risk factor for mortality globally and in Canada
- D) Plant-Based diets are important for prevention, treatment and reversal of chronic disease
- E) International organisations and medical clinical guidelines support a plant-based diet for prevention and management of chronic disease
- F) Our Canada Food Guide supports a plant-based diets to promote the health of Canadians, and greater adherence to the Canada Food Guide has been shown to reduce cardiovascular disease
- G) South Asian people have higher rates of cardiovascular disease and diabetes and manifest these diseases 10 years earlier than Caucasians. Dietary and other lifestyle interventions are especially important in this population.
- H) Dairy concerns
- I) Focus on diabetes

A. The increasing burden of chronic disease in Canada, including in children

Chronic diseases, i.e. noncommunicable diseases (NCDs) account for the highest causes of death in Canada and the world. Cardiovascular diseases (heart disease and stroke), cancer, chronic respiratory diseases and

diabetes, are responsible for 65% of all deaths in Canada each year. Cancer is now the leading cause of death in Canada followed by heart disease.

Some worrying additional facts:

-The incidence of 13 types of cancer is increasing in the under 50 year old age group.

-Children: obesity and diabetes are increasing in incidence in children

- In 2022, 30% adults aged 18 years and older in Canada were obese, 35% overweight
- In 2022, 30% adolescents aged 12-17 years were overweight or obese
- Obesity is a major risk factor for the development of type 2 diabetes and other NCDs
- Compared to 10 years ago, the incidence of Type 2 diabetes mellitus in children in Canada has increased by 60% overall putting them at 2–3 times higher risk for mortality compared to the general population

-Because of the aging population the total number of people with chronic diseases will increase and the health system cannot support this level of illness

References:

1. https://sencanada.ca/content/sen/committee/421/SOCI/Briefs/ChronicDiseasePreventionAlliance_e.pdf
2. https://publications.gc.ca/collections/collection_2014/aspc-phac/HP35-39-2013-eng.pdf
3. <https://guidelines.diabetes.ca/cpg/chapter35>
4. Patel, T. J., Ayub, A., Bone, J. N., Hadjiyannakis, S., Henderson, M., Nour, M. A., Pinto, T. E., Wicklow, B., Hamilton, J. K., Sellers, E. A. C., & Amed, S. (2023). Incidence Trends of Type 2 Diabetes Mellitus, Medication-Induced Diabetes, and Monogenic Diabetes in Canadian Children, Then (2006–2008) and Now (2017–2019). *Pediatric Diabetes*, 2023, 1–10. <https://doi.org/10.1155/2023/5511049>
<https://www.hindawi.com/journals/pedi/2023/5511049/>

B. Ill health has negative consequences on the Canadian economy

This is from a brief by the Chronic Disease Prevention Alliance of Canada (www.cdpc.ca)

“As well as taking healthy years of life away from Canadians, they also exert a significant financial toll. In total, it is estimated that chronic diseases and other illnesses cost the Canadian economy \$190 billion annually, with \$122 billion in indirect income and productivity losses, and \$68 billion in direct health care costs. The direct cost of chronic diseases accounts for about 58% of the annual health care spending in our country. As well, we know that the cost of diet-related disease in Canada in 2015 was estimated at \$26 billion/annum.”

Reference:

<https://www.ourcommons.ca/content/committee/421/fina/brief/br9073636/br-external/chronicdiseasepreventionallianceofcanada-e.pdf>

C. Diet is the leading risk factor for mortality globally and in Canada

Global Burden of Disease Study

Globally, in 2017, dietary risks were responsible for 11 million deaths (22% of all deaths among adults) and 255 million Disability Adjusted Life Years (15% of all DALYs among adults). Cardiovascular disease was the leading cause of diet-related deaths followed by cancers and type 2 diabetes (338 714 deaths and 24 million DALYs). 45% of total diet-related deaths and 177 70% of total diet-related DALYs occurred among adults aged younger than 70 years (ie premature death).

In this study the top 5 dietary attributable risk factors for death were:

Too much sodium (reflecting our processed food intake)

And not enough: whole grain, fruits, nuts and seeds and vegetable intake, i.e. plant foods

Importantly poor diet accounts for more deaths globally than tobacco. The study concluded, “Our findings show that a suboptimal diet is responsible for more deaths than any other risks globally, including tobacco smoking, highlighting the urgent need for improving human diet across nations.”

Specifically in Canada (see reference 2): In 2016, the 5 leading risk factors for mortality in Canadians were diet, tobacco, high systolic blood pressure, high fasting plasma glucose and high BMI. Note that the last 3 risk factors can all be prevented and reversed by plant-based nutrition.

References

1. GBD 2017 Diet Collaborators. Health effects of dietary risks in 195 countries, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet*. 2019 May 11;393(10184):1958-1972. doi: 10.1016/S0140-6736(19)30041-8. Epub 2019 Apr 4. Erratum in: *Lancet*. 2021 Jun 26;397(10293):2466. PMID: 30954305; PMCID: PMC6899507.

2. Alam S, Lang JJ, Drucker AM, Gotay C, Kozloff N, Mate K, Patten SB, Orpana HM, Afshin A, Cahill LE. Assessment of the burden of diseases and injuries attributable to risk factors in Canada from 1990 to 2016: an analysis of the Global Burden of Disease Study. *CMAJ Open*. 2019 Feb 28;7(1):E140-E148. doi: 10.9778/cmajo.20180137. PMID: 30819694; PMCID: PMC6397034.

D. Plant-Based diets are important for prevention, treatment and reversal of chronic disease

We have decades of data supporting the role of plant-based nutrition in the prevention, management and in some cases reversal of chronic diseases including cardiovascular disease, diabetes, obesity, hypertension, and cancer.

Prevention:

A plant-based diet can reduce the risk of heart disease by at least 25%, Type 2 diabetes by 50%, hypertension by 60%, cancer by 15%, and maintain healthy cholesterol levels.

Treatment and reversal

A plant-based diet can:

- Be as effective as medication for treating high cholesterol and hypertension.
- Can treat and put type 2 diabetes into remission
- With and without other lifestyle factors, has been shown to arrest the progression of coronary heart disease, and in some studies reverse atherosclerotic plaque
- slow progression of early stage prostate cancer
- Help maintain healthy weight

E. International organisations and medical clinical guidelines support a plant-based diet for prevention and management of chronic disease

Many influential clinical guidelines now also endorse the use of plant-based diets in clinical practice. The 2019 American College of Cardiology guidelines for primary prevention of cardiovascular disease support plant-based diets, including vegetarian and vegan diets, as part of their recommendations (1). The American Association of Clinical Endocrinologists and American College of Endocrinology recommend a primarily plant-based eating plan as the first line lifestyle intervention for treatment of type 2 diabetes (2). The American Diabetes Association's consensus on nutrition therapy for diabetes and prediabetes acknowledge that vegetarian and vegan diets are beneficial for the prevention and treatment of diabetes (3). The World Cancer Research Fund recommends a diet centred around fruits, vegetables, whole grains and beans for cancer prevention and after a diagnosis of cancer (4). The American College of Lifestyle Medicine dietary lifestyle position statement for treatment and potential reversal of disease recommends 'an eating plan based predominantly on a variety of minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds'.

References:

1. Arnett DK, Blumenthal RS, Albert MA, Buroker AB, Goldberger ZD, Hahn EJ, et al. 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation*. 2019;
2. Garber AJ, Handelsman Y, Grunberger G, Einhorn D, Abrahamson MJ, Barzilay JI, et al. Consensus statement by the American Association of clinical Endocrinologists and American College of Endocrinology on the comprehensive type 2 diabetes management algorithm - 2020 executive summary. *Endocrine Practice*. 2020.
3. Evert AB, Dennison M, Gardner CD, Timothy Garvey W, Karen Lau KH, MacLeod J, et al. Nutrition therapy for adults with diabetes or prediabetes: A consensus report. *Diabetes Care*. 2019.

4. Rock CL, Thomson C, Gansler T, Gapstur SM, McCullough ML, Patel A V., et al. American Cancer Society guideline for diet and physical activity for cancer prevention. CA Cancer J Clin. 2020

American College of Lifestyle Medicine (ACLM) Dietary Position Statement

<https://lifestylemedicine.org/overview/>
<https://lifestylemedicine.org/nutrition-as-medicine/>

“For the treatment, reversal and prevention of lifestyle-related chronic disease, the ACLM recommends an eating plan based predominantly on a variety of minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds.”

“Extensive scientific evidence supports the use of a whole-food, predominantly plant-based diet as an important strategy in the prevention of chronic disease, treatment of chronic conditions, and in intensive therapeutic doses, reversal of chronic illness. Such a diet is rich in fiber, antioxidants, and nutrient dense. Choose a variety of minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds.”

Food plate toolkit/graphic

Their food plate is 100% plant based.

Position statement from the Academy of Nutrition and Dietetics the largest dietetic association in the world supports vegan/vegetarian diets at all stages of life

I always like to include this as there is standard pushback from those who think that plant-based diets are inadequate.

‘It is the position of the Academy of Nutrition and Dietetics that appropriately planned vegetarian, including vegan, diets are healthful, nutritionally adequate, and may provide health benefits for the prevention and treatment of certain diseases. These diets are appropriate for all stages of the life cycle, including pregnancy, lactation, infancy, childhood, adolescence, older adulthood, and for athletes. Plant-based diets are more environmentally sustainable than diets rich in animal products because they use fewer natural resources and are associated with much less environmental damage. Vegetarians and vegans are at reduced risk of certain health conditions, including ischemic heart disease, type 2 diabetes, hypertension, certain types of cancer, and obesity. Low intake of saturated fat and high intakes of vegetables, fruits, whole grains, legumes, soy products, nuts, and seeds (all rich in fiber and phytochemicals) are characteristics of vegetarian and vegan diets that produce lower total and low-density lipoprotein cholesterol levels and better serum glucose control. These factors contribute to reduction of chronic disease.’

Reference:

Melina V, Craig W, Levin S. Position of the Academy of Nutrition and Dietetics: Vegetarian Diets. J Acad Nutr Diet. 2016 Dec;116(12):1970-1980. doi: 10.1016/j.jand.2016.09.025. PMID: 27886704.

F. Our Canada Food Guide supports a plant-based diets to promote the health of Canadians, and greater adherence to the Canada Food Guide has been shown to reduce cardiovascular disease

The 2019 Canada Food Guide supports a plant-based diet. If we look at the plate

- a. Half the plate with fruits and vegetables
- b. a quarter whole grains
- c. a quarter protein of which at least half should be from plant-sources

This makes the plate at least 87.5% plant-based.

A 2022 study showed that greater adherence to the 2019 Canada Food Guide recommendations on healthy food choices reduces the 11-y risk of cardiovascular disease by 24% in middle-aged and older adults. As we know cardiovascular disease is the second highest cause of death and premature death in Canada, and first highest globally.

Reference:

Brassard D, Manikpurage HD, Thériault S, Arsenault BJ, Lamarche B. Greater adherence to the 2019 Canada's Food Guide recommendations on healthy food choices reduces the risk of cardiovascular disease in adults: a prospective analysis of UK Biobank data. *Am J Clin Nutr.* 2022 Dec 19;116(6):1748-1758. doi: 10.1093/ajcn/nqac256. PMID: 36124644; PMCID: PMC9761735.

G. South Asian people have higher rates of cardiovascular disease and diabetes. Dietary and other lifestyle interventions are important in this population.

Given the population of Brampton I think it would be important to make these points. 52% of people in Brampton identified as South Asian in the 2021 census.

People from South Asian countries (Indian, Pakistani, Bangladeshi, Nepali, and Sri Lankan) have disproportionately higher rates of cardiovascular disease (heart disease and stroke), and type 2 diabetes and, on average, develop these conditions 10 years earlier than other racial and ethnic groups.

It is not understood why this is, as it is not explained by widely known risk factors such as high blood pressure, diabetes or smoking, but clearly is something intrinsic to being South Asian. Even though many South Asians are vegetarian, diet quality matters, and data shows that eating a healthy plant-based diet (vs unhealthy with fried foods, and high fat dairy products), will improve cardiometabolic risk factors in these populations.

There is a fantastic group in the US working on the South Asian population, the MASALA study group.

<https://www.masalastudy.org/about>

<https://www.masalastudy.org/blog/2022/7/7/the-positive-impact-of-healthy-plant-based-diets>

H) Dairy concerns

The current Canada Food Guide has removed dairy as an essential food group and has recommended that water should be the beverage of choice. Not only is dairy unnecessary for a healthy diet but it can be problematic for those with lactose intolerance and has been linked to several adverse health conditions, including acne, eczema, asthma, type I diabetes, and several cancers including prostate, breast, endometrial and ovarian cancers. (1,2,3) It is estimated that 70% of the world's population is lactose intolerant, with 44% of Canadians surveyed reporting lactose intolerance. (4) Children who are lactose intolerant but who consume dairy for its purported health benefits, may be subjected to abdominal pain, diarrhea and fatigue, and other negative impacts of dairy intolerance. Dairy products are also a significant source of saturated fat in the diet which is a risk factor for cardiovascular disease, diabetes and hypertension.

References

1. Walter C Willett and David Ludwig. Milk and health. *N. Engl. J. Med.* 2020;382:644–654.
2. Gary E Fraser, Karen Jaceldo-Siegl, Michael Orlich, Andrew Mashchak, Rawiwan Sirirat, Synnove Knutsen, Dairy, soy, and risk of breast cancer: those confounded milks, *International Journal of Epidemiology* 2020, dyaa007, <https://doi.org/10.1093/ije/dyaa007>
3. Aune D, Navarro Rosenblatt DA, Chan DS, Vieira AR, Vieira R, Greenwood DC, Vatten LJ, Norat T. Dairy products, calcium, and prostate cancer risk: a systematic review and meta-analysis of cohort studies. *Am J Clin Nutr.* 2015 Jan;101(1):87-117. doi: 10.3945/ajcn.113.067157. Epub 2014 Nov 19. PMID: 25527754.
4. <https://www.statista.com/statistics/944301/prevalence-of-food-intolerances-canada/>

I) Diabetes: See Michelle McMaken and Sapana Shah, "A plant based diet for the prevention and treatment of Type 2 diabetes," *Journal of Geriatric Cardiology*, 2017.

All the animal foods are associated with an increase the risk of diabetes, including eggs

- Mechanisms include the saturated fat intake (which all meat, fish, chicken, and dairy products have including ghee which is heavily used in the S. Asian population) which increases the fat inside liver, muscle and pancreas cells which blocks the action of insulin and so reduces the glucose getting inside

the cells, and increases risk of diabetes. This is thought to be the primary contributing factor to diabetes

- Other contributing mechanisms include the heme iron, advanced glycation end products, which increase insulin resistance
- Animal products promote obesity and overweight which increases risk of diabetes
- Animal products increase risk of cardiovascular disease which is more common in people with diabetes and the leading cause of premature death in people with diabetes.


Encouraging points:


- Plant-based nutrition also helps mitigate the other complications of diabetes such as peripheral vascular damage, kidney damage and vision loss.
- Small changes can make big differences:
- One study from Harvard showed that by substituting 5% of energy intake from animal products with plant protein reduced risk of diabetes by 23% (see page 3 of)
- Whole food plant-based nutrition can prevent diabetes, manage diabetes and REVERSE diabetes


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"Art can ...evoke reverence for the dignity of every [person] and for the life of every animal, can make [people] ashamed of luxury, of violence, of revenge, or of using for their pleasure that of which others are in need; can compel people freely, gladly, and without even noticing it, to sacrifice themselves in the service of [others]. The task of art ... is to make that feeling of...love of one's neighbour ... the customary feeling and the instinct of all [people]."

- Leo Tolstoy, *What is Art?*