31 August 2023

Parliamentary Secretariat
PO Box 6021
Parliament House Canberra
CANBERRA ACT 2600

Dear Committee Members,

Re: Parliamentary Inquiry Diabetes in Australia

Doctors for Nutrition (DFN) is a not-for-profit charity operating in Australia and New Zealand with a vision for a ***world free of preventable disease so that everyone can thrive and live to their full potential.***

DFN commends the House of Representatives Standing Committee on Health, Aged Care, and Sport (the Committee) for undertaking this inquiry into Diabetes in Australia and exploring this important issue with a view to improving policies and supporting all Australians.

Executive Summary

Type 2 diabetes accounts for 85% of all cases and is largely preventable by maintaining a healthy lifestyle. A whole food plant-based (WFPB) eating pattern that consists of fruits, vegetables, whole grains, legumes, nuts, and seeds while minimising and preferably excluding animal products, refined grains, ultra processed foods, sugars, and oils is the key intervention to prevent Type 2 diabetes.

Research has consistently demonstrated the numerous benefits of a WFPB eating pattern for the prevention and reversal of diabetes, including weight loss, improved insulin sensitivity, blood sugar regulation, reduced inflammation, and a lower risk of comorbidities.

The Committee is urged to focus on practical, affordable, evidence-based measures that reduce the development of diabetes in the Australian population. Widespread education and structural changes are required, along with supporting Government policies and regulations, to encourage adoption of WFPB nutrition. A good start would be updating the Australian Dietary Guidelines to emphasise the benefits of a plant-dominant eating pattern.

The supporting evidence will be summarised using the categories identified by the Committee for exploration in the Terms of Reference (ToR).

ToR 1: Causes of diabetes

Diabetes is a chronic health condition characterised by high levels of glucose in the blood due to the body's inability to produce, or effectively use, insulin. The main types of diabetes are outlined in the terms of reference, and suboptimal dietary eating patterns can significantly contribute to the onset and progression of the condition.

Lifestyle and dietary choices are the single most influential factors in the development of type 2 diabetes. Risk factors vary, and genetics can play a role, but the underlying cause will invariably be traced back to a poorly regulated food system. Inadequate access to healthy food, a lack of knowledge, and advertising discouraging a sustainable and healthy diet are also factors in Australia that contribute to suboptimal food choices.

DFN submits that the vast majority of people living with diabetes could improve their health outcomes through a simple and deliberate eating pattern that focuses on WFPB nutrition. WFPB eating reduces the risk of developing type 2 and gestational diabetes, as well as helping to manage blood glucose levels in people with pre-existing diabetes.

In China in 1980, less than 1% of the population had Type 2 diabetes. Thereafter, the Chinese diet began to shift towards Westernisation. In 1970, for example, the Chinese diet had about 8% energy from fat, 10% protein, and 83% carbohydrates. By 2011, this dietary pattern had become Westernised, with 32% fat, 13% protein, and 54% carbohydrate. It has been estimated that 11.6% of the Chinese population now has diabetes, and 50.1% has pre-diabetes[1].

[1] lifestylemedicine.org.au/content/type-2-diabetes-and-nutrition.

This is an excellent case study on how a Western style, high saturated fat diet can significantly contribute to diabetes prevalence. Although focusing on a single element of nutrition can be misleading, Western, and Australian diets include an overreliance on animal based, high saturated fat and ultra processed foods.

ToR2: New Evidence for Diagnosis, Prevention and Management of Diabetes

DFN is a strong advocate for the prevention of disease, and this is an area on which the Committee must focus its attention. Strengthening Government policy, and regulation to support more effective strategies to prevent and manage diabetes, is of critical importance.

The healthcare system is designed to treat illness and is poorly equipped to assist the general population in preventing chronic illness; this is especially the case for type 2 diabetes.

Prevention

Numerous studies have shown that WFPB eating patterns can reduce the risk of developing type 2 diabetes. In a study published in the *Journal of the American College of Nutrition*, researchers found that people who followed a vegan diet had a 78% lower risk of developing diabetes, compared to non-vegetarians. The study also showed that a plant-based diet could be helpful in preventing the progression of prediabetes to type 2 diabetes[2].

Diagnosis

The diagnosis of diabetes involves measuring blood glucose levels. In addition to blood glucose levels, glycated haemoglobin (HbA1c) is a reliable indicator of long-term glucose control. A plant-based diet has been shown to improve glycemic control in people with diabetes. A systematic review and meta-analysis of 11 randomised controlled trials published in the *Journal of the Academy of Nutrition and Dietetics* showed that a plant-based diet significantly reduced HbA1c levels in people with type 2 diabetes.[3]

[2] Tonstad, S., Butler, T., Yan, R., Frazer, G. E. (2009). Type of vegetarian diet, body weight, and prevalence of type 2 diabetes. Journal of the American College of Nutrition, 28(6), 608-616.
[3] Yokoyama, Y., Barnard, N. D., Levin, S. M., & Watanabe, M. (2017). Vegetarian diets and glycemic control in diabetes: a systematic review and meta-analysis Journal of the Academy of Nutrition and Dietetics, 117(2), 305-318

Management of Diabetes:

The management of diabetes involves lifestyle modifications, including diet and physical activity, and medication if necessary. A WFPB eating pattern is a very effective tool for managing type 2 diabetes. A randomised controlled trial published in the *Journal of Geriatric Cardiology,* showed that a plant-based diet improved glycemic control and reduced the need for medication in people with type 2 diabetes[4].

A WFPB eating pattern is rich in fibre, antioxidants, and phytochemicals, which can reduce body fat, improve insulin sensitivity, and reduce inflammation[5]. Plant-based foods are also low in saturated fat and cholesterol, which are known risk factors for cardiovascular disease, a common comorbidity of diabetes. A systematic review and meta-analysis published in the *Journal of the American Heart Association* showed that a plant-based diet reduced the risk of developing cardiovascular disease by 40% compared to a non-vegetarian diet[6].

ToR 3: Impacts of diabetes on Australia's health system and economy

The impact on the wellbeing of type 2 diabetic patients in the physical, mental, emotional, and financial spheres is difficult to quantify, but the benefits of adopting WFPB nutrition are wide-ranging and this way of eating is a low-cost, environmentally sustainable intervention.

People with diabetes usually experience reduced productivity, increased absenteeism, and early retirement due to diabetes-related complications. The Australian Institute of Health and Welfare estimates that the economic cost of diabetes in Australia was $14.6 billion in 2017, including $6.6 billion in lost productivity and $3.7 billion in healthcare costs.

Lifestyle changes, such as adopting a WFPB eating pattern, can be effective tools in preventing and managing diabetes-related complications, reducing healthcare costs, and potentially improving economic outcomes. A plant-based diet improves glycemic control and reduces the need for medication in patients with type 2 diabetes[7].

[4] Kahleova, H., Klementova, M., Herynek, V., Skoch, A., Herynek, S., Hill, M., & Pelikanova, T. (2017). The effect of a plant-based diet on glucose control in type 2 diabetes: a randomised controlled trial Journal of Geriatric Cardiology, 14(5), 342-355.
[5] Khambatta, C. & Barbaro, R. (2020). Mastering Diabetes: The Revolutionary Method to Reverse Insulin Resistance Permanently in Type 1, Type 1.5, Type 2, Prediabetes, and Gestational Diabetes. Avery.
[6] Ibid footnote 2
[7] Ibid

ToR4: Interrelated health issues between diabetes and obesity in Australia?

Obesity is a major risk factor for type 2 diabetes and gestational diabetes, while diabetes can also contribute to weight gain and obesity. Obesity is a significant risk factor for type 2 diabetes, which accounts for about 85-90% of all type 2 diabetes cases in Australia. According to Diabetes Australia, up to 60% of type 2 diabetes diagnoses can be attributed to excess weight or obesity. Obesity also increases the risk of developing gestational diabetes.

A WFPB eating pattern is an effective tool for the prevention and management of obesity. Plant-based foods are naturally low in calories and saturated fat and high in fibre, which can help reduce caloric intake and promote satiety. A randomised controlled trial published in the *Journal of the Academy of Clinical Nutrition* showed that a plant-based diet resulted in greater weight loss compared to a non-vegetarian diet[8].

ToR 5: Effectiveness of current Australian Government policies and programs to prevent, diagnose, and manage diabetes.

Despite several policies and government programs, the prevalence of diabetes in Australia continues to increase. According to the Department of Health and Aged Care the number of people in Australia living with diabetes by 2050 is expected to reach 3.1 million. More comprehensive and targeted prevention strategies are needed to address this concerning trend.

Given the increasing prevalence of type 2 diabetes within the current population, it is fair to say that the existing interventions have been ineffective, and the evidence supports the following interventions to manage type 2 diabetes:

1. Refocus of the review of the *2013 Australian Dietary Guidelines* to deeply consider the potential impact of WFPB eating patterns towards managing healthy weight, providing adequate nutrition and minimising reliance upon animal products
2. Investigate and consider using consumer regulation to encourage improved food choices by manufacturers, suppliers, vendors, and the general public. The Government ought to explore the introduction of an 'ultra processed food tax' to discourage poor food choices and fund the spiralling cost of diabetes in the health care system.

[8] Barnard, N. D., Gloede, L., Cohen, J., Jenkins, D. J., Turner-McGrievy, G., Green, A. A., & Ferdowsian, H. (2016). A low-fat vegan diet and a conventional diabetes diet in the treatment of type 2 diabetes: a randomized, controlled, 74-wk clinical trial. The American Journal of Clinical Nutrition, 104(3), 618-627.

3. Educate the medical profession and the general population that WFPB eating patterns can effectively prevent type 2 diabetes and support positive health outcomes.

DFN appreciates the chance to respond to your inquiry, and we would be happy to talk about our recommendations,or interventions, if the Committee wanted to understand any part of this submission more thoroughly.

Yours sincerely,

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CEO
Doctors for Nutrition