Invited Speaker Abstract

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Title of Presentation

The role of plant-based eating in the prevention of diabetes and obesity

1. Abstract

Vegan or vegetarian diets have been suggested to be beneficial for weight maintenance and health. However, not much is known on whether variation in the degree of having a plant-based versus animal-based diet may be beneficial. We aimed to explore whether adhering to a more plant-based diet, beyond strict vegan or vegetarian diets, may help prevent adiposity and diabetes risk. For this purpose, we created a plant-based diet index by giving plant-based foods positive scores and animal-based foods reverse scores. A higher score on the index reflected an overall more plant-based and less animal-based diet.

Most of our analyses were embedded in the Rotterdam Study, a prospective population-based cohort in the Netherlands including 14,926 participants aged 45 years and over. Dietary intake was measured with extensive food-frequency questionnaires and was scored according to the plant-based diet index. Data on anthropometrics, body composition (using DXA), and insulin resistance were collected every 3 to 5 years. We used statistical models taking into account the longitudinal data and controlling for several sociodemographic and lifestyle factors.

Overall, we observed that higher adherence to a plant-based diet was associated with a lower BMI, waist circumference, fat mass index, and body fat percentage. Furthermore, independent of body composition, a more plant-based diet was also associated with lower insulin resistance and a lower type 2 diabetes risk.

In conclusion, a more plant-based and less animal-based diet may lower risk of adiposity, insulin resistance, prediabetes, and type 2 diabetes, irrespective of general healthfulness of the specific plant- and animal-based foods. These findings strengthen dietary recommendations to adopt a more plant-based diet.

2. key references

Chen Z, Zuurmond MG, van der Schaft N, Nano J, Wijnhoven HAH, Ikram MA, Franco OH, Voortman T. Plant versus animal based diets and insulin resistance, prediabetes and type 2 diabetes: The rotterdam study. Eur J Epidemiol 2018;33(9):883-93. *doi:10.1007/s10654-018-0414-8.*

Chen Z, Schoufour JD, Rivadeneira F, Lamballais S, Ikram MA, Franco OH, Voortman T. Plant-based diet and adiposity over time in a middle-aged and elderly population: The Rotterdam study. Epidemiology 2018;30(2):303-10. *doi:10.1097/EDE.0000000000000961*.

3. key messages