

DIABETES

Increased potato consumption linked to GDM

Potatoes have a high glycaemic index, and in the USA are included within the vegetable food group of dietary guidelines; however, debate surrounds whether they should be included in these recommendations. In the results of a new study, investigators now reveal that consumption of high volumes of potato before pregnancy can significantly increase the risk of developing gestational diabetes mellitus (GDM), which suggests that their role in a healthy diet should be reconsidered.

Using data from the Nurses' Health Study II (NHSII), a prospective cohort of 116,430 women aged 24–44 years in 1989 in the USA, the investigators identified 15,632 women who had a singleton pregnancy (including 6,061 women who had more than one pregnancy) between 1991 and 2001. Out of this total of 21,693 pregnancies, 854 individuals reported developing GDM. The NHSII also administers a biennial self-reported disease and lifestyle questionnaire, including typical food intake for each individual.

Cross-referencing these data with that of self-reported consumption of potatoes, the team found a significant trend in the risk of developing GDM with increasing amounts of potato.

Compared with less than one portion per week, the relative risk of developing GDM was 1.21 (95% CI 0.98–1.50) for one serving, 1.34 (95% CI 1.10–1.64) for 2–4 servings and as high as 1.62 (95% CI 1.24–2.13) for five or more servings of potato over the same time frame ($P < 0.001$ for trend). This trend remained significant even when adjusting for BMI ($P = 0.006$)

Moreover, the team estimated that by simply substituting two of these potato portions with other vegetables, legumes or whole grain foods the risk of developing GDM could be reduced by 9%, 10% and 12%, respectively.

The association was also still significant even after adjustment for other foods known to influence the development of diabetes mellitus, using the total continuous consumption of potato as the major exposure, after addressing incomplete covariate data and also examining the most recent potato consumption, as opposed to the cumulative average intake.

The investigators could not show a causal association owing to the observational nature of the data. In addition, these data did not include information on gestational weight gain, which might influence the risk of developing GDM.

However, the association between potato intake and GDM is clear and these findings need to be confirmed in further studies.

Tim Geach

ORIGINAL ARTICLE Bao, W. et al. Pre-pregnancy potato consumption and risk of gestational diabetes mellitus: prospective cohort study. *BMJ* 352, h6898 (2016)

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