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We use this protocol and it's working

Association between the overall inflammatory potential of diet during pregnancy and the child's subsequent risk of type 1 diabetes

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Empirical Inflammatory Dietary Index

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ABSTRACT

A growing body of evidence suggests that diet is a modifiable determinant of low-grade systemic inflammation, as expressed by inflammatory markers. Processed meats, dairy products, and refined carbohydrates have been linked to higher levels of pro-inflammatory markers(1,2). Contrastingly, certain types of fruits, vegetables, and whole grains have been associated with lower levels of inflammation and inflammatory diseases (2–4).

Type 1 diabetes, an autoimmune disease, is due to both genetic and environmental contributions, resulting in an immune-mediated destruction of insulin-producing β-cells and leading to lifelong insulin treatment (5). The incidence of type 1 diabetes is highest in countries following a Western lifestyle (6), and the increasing rate has been faster than can be accounted for by genetic drift, therefore pointing to the importance of environmental factors (6). As an autoimmune response against the insulin-producing beta cells is a central feature of type 1 diabetes (2,7,8), external factors that may influence the immune system and inflammatory responses constitute potentially interesting candidate exposures for novel research. Since the immune system establishes and develops in early life and to a certain degree antenatally (7), there is good reason to explore the role of diet consumed during pregnancy with a special focus on dietary components with inflammation- and immuno-regulatory properties. It is possible that such components may alter the immune cell reactivity and inflammatory state of the mother during pregnancy and subsequently in the child (9,10).

Several validated indexes have been developed to quantify and reflect the overall inflammatory potential of diet by correlating the frequency of consumption of food groups with the concentration of inflammatory markers in the blood (11,12). Such inflammatory diet scores have been associated with an increased risk of cardiovascular disease (13), colorectal cancer (14), and prostate cancer (15).

Our study will address this question: Is there an association between inflammatory dietary patterns during pregnancy and type 1 diabetes risk in the offspring? The hypothesis of this study is that consuming a pro-inflammatory diet during pregnancy increases offspring risk of developing type 1 diabetes. This will be studied in a prospective cohort design in the Danish National Birth Cohort (DNBC), where we have developed an inflammatory diet index for pregnancy diet using the methodology previously described by Tabung et al. to rank the women with respect to the overall inflammatory potential of the diet they had reported to consume during pregnancy (16).

ATTACHMENTS

Statistical Analysis Plan for EDII in pregnancy and offspring T1D risk v. 130923.pdf