
Cross-sectional associations between dietary intake and carotid intima media thickness in type 2 diabetes: baseline data from a randomised trial.


ABSTRACT

OBJECTIVE: To assess associations between dietary intake and carotid intima media thickness (CIMT) by carotid ultrasound (CUS), a surrogate marker of cardiovascular disease (CVD) risk, in those with type 2 diabetes.

DESIGN: Cross-sectional analysis of baseline data from 325 participants from three randomised controlled trials collected in the same way.

SETTING: Risk Factor Modification Centre, St. Michael's Hospital, Toronto, Canada.

PARTICIPANTS: 325 participants with type 2 diabetes, taking oral antidiabetic agents, with an HbA1c between 6.5% and 8.0% at screening, without a recent cardiovascular event.

MAIN OUTCOME MEASURES: CIMT by CUS and associations with dietary intake from 7-day food records, as well as anthropometric measures and fasting serum samples.

RESULTS: CIMT was significantly inversely associated with dietary pulse intake ($\beta=-0.019$, $p=0.009$), available carbohydrate ($\beta=-0.004$, $p=0.008$), glycaemic load ($\beta=-0.001$, $p=0.007$) and starch ($\beta=-0.126$, $p=0.010$), and directly associated with total ($\beta=0.004$, $p=0.028$) and saturated ($\beta=0.012$, $p=0.006$) fat intake in multivariate regression models adjusted for age, smoking, previous CVD event, blood pressure medication, antidiabetic medication and ultrasonographer.

CONCLUSIONS: Lower CIMT was significantly associated with greater consumption of dietary pulses and carbohydrates and lower total and saturated fat intake, suggesting a potential role for diet in CVD risk management in type 2 diabetes. Randomised controlled trials are anticipated to explore these associations further.