Healthy & unhealthy dietary patterns significantly change over five years follow-up: results from the AusLong Study

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Background: Dietary intake may be relevant in multiple sclerosis (MS) onset and progression.

Objective: To examine dietary patterns in a cohort of participants in the first five years following symptom onset, including change over time and how the patterns correlate with demographic and behavioural covariates.

Design Methods: Food consumption, reported by a cohort of participants in the early stages of MS (the AusLong Study) was used to evaluate the distribution of dietary intake at baseline and five-year review. Using iterated principal factor analysis, patterns of diet were extrapolated from food intake questionnaires, and determinants of individual-level pattern scores were evaluated using linear regression.

Results: Three reproducible dietary patterns we labelled 'Western', 'Mixed' and 'Prudent' were independently found at baseline and five-year review. Western dietary pattern score was significantly lower among females and older participants. Prudent pattern was higher among older, more physically active, and more educated participants, but lower among smokers. The cohort increased their Prudent and decreased their Western and Mixed pattern scores during follow-up, with marked & significant differences by sex, BMI, smoking behaviour and employment.

Conclusions: While all three dietary patterns persisted over five years of follow-up, there was evidence that some participants improved their diet while others did not. These findings have implications for the health improvement efforts of people in the early stages of living with MS.