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What are the dietary patterns of Australian adolescents and are they associated with health?

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Background – Increasingly, measures of dietary patterns have been used to capture the complex nature of dietary intake and investigate their association with health. Healthy dietary patterns may be important in the prevention of chronic disease however there are few investigations in adolescents.

Objective – The objective of this study was to describe the dietary patterns of adolescents and their associations with socio-demographic factors and health outcomes.

Design – Analysis was conducted of data collected in the 1995 National Nutrition Survey on participants aged 12-18 years who completed a 108 item food frequency questionnaire (n=764). Dietary patterns were identified using factor analysis and pattern scores were calculated from the consumption of the food items in each dietary pattern.

Outcomes – Factor analysis revealed three dietary patterns labeled on the basis of the food items that loaded highly, that is, a fruit, salad, fish and cereals pattern, a vegetables pattern and a high fat and sugar pattern which explained 11.9%, 5.9% and 3.9% of the variation in food intakes, respectively. High consumers of the high fat and sugar pattern were more likely to be male (p<0.001), while high consumers of the vegetable pattern were more likely to be living in rural areas compared to metropolitan areas (p=0.004). There were no significant associations with age or area-level index of relative socio-economic disadvantage. The fruit, salad, fish and cereals pattern was significantly associated with diastolic blood pressure (p=0.019) with high consumers having lower blood pressure. In contrast, high consumers of the high fat and sugar pattern had significantly higher systolic blood pressure (p=0.026).

Conclusion – Diets characterised by healthier food items were associated with lower blood pressure while consumption of foods high in fat and sugar were associated with higher blood pressure. Specific dietary patterns are already evident in adolescence and may be associated with health.