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Dietary habits: a long-term effect of childhood farming lifestyle

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Changes in diet over recent decades have been reported in most developed countries, with an increased intake of junk food and a decreased intake of fresh fruit and vegetables. The objective of the present study was to investigate the associations between dietary habits in adulthood, classified as dietary patterns, and a farming lifestyle during childhood, one cultural factor that has changed over recent decades.

Information was collected on dietary habits in 1993 and on farming background in 2003 in a large population of French women (E3N study; mostly conducted in teachers). Of 74 531 women who completed the dietary questionnaire, data on farming background were available for 64 409 women. Retrospective data on farm background included the questions 'did you live on a farm during childhood' and 'were your parents farmers'. The 208 food items from the FFQ were grouped *a priori* into fifty-six separate food groups and dietary patterns were compiled from these food groups using principal component analysis. Three major dietary patterns were identified: a 'prudent' pattern (vegetables and fruits), a 'Western' pattern (pizza and salty pies, dessert and cured meats) and an 'alcohol and nuts' pattern (nuts, salty biscuits and wine). Pattern scores were categorized into tertiles and the prevalence of farm background data compared between tertiles.

Among the 64 409 women 77.9% had never lived on a farm during childhood, 12.1% had lived on a farm with parents who were farmers and 10.0% had lived on a farm with parents who were not farmers. The 'prudent' diet was positively associated with having parents who were farmers ($P=0.02$); the highest intake of the prudent diet (tertile 3) represented 35.2% of women with parents who were farmers v. 33.6% of women whose parents were not farmers. Among women whose parents were not farmers, having lived on a farm was significantly associated with a higher intake of the 'prudent' diet. The 'alcohol and nuts' pattern was negatively associated with having parents who were farmers ($P<0.001$); the highest intake of 'alcohol and nuts' pattern (tertile 3) represented 24.7% of women with parents who were farmers v. 34.5% of those whose parents were not farmers. Among women whose parents were not farmers, having lived on a farm was not associated with the 'alcohol and nuts' pattern. All these associations remained significant after adjustment for age. No association was found with the 'Western' diet.

The results suggest that overall diet in adulthood is associated with a farming lifestyle during childhood. Women with parents who were farmers are more likely to eat fruit and vegetables in adulthood and to have a lower intake of nuts and wine than women whose parents were not farmers.