



Dairy consumption is not associated with disability progression in an Australian longitudinal cohort study of people with multiple sclerosis

H. Papendorf¹, A. Daly¹ and L. Black¹
¹Curtin University, Bentley, WA, Australia.

Current evidence investigating associations between diet and disease progression among people with multiple sclerosis (MS) is limited. Nevertheless, a range of special diets, many of which exclude or restrict dairy products, are marketed to people with MS.⁽¹⁾ Dairy products are a key source of protein, calcium, and other vitamins and minerals; hence, restricting dairy products without adequate food replacement may result in nutritional deficiencies. We aimed to test associations between dairy consumption and disability progression in people with MS over 10 years from first clinical diagnosis of central nervous system demyelination. We used data from the AusLong Study, an Australian longitudinal cohort study investigating environmental risk factors for MS disease progression.⁽²⁾ A food frequency questionnaire, administered at baseline, 5 and 10 years was used to quantify total dairy consumption (serves per day) and consumption of specific dairy products, namely milk, cheese and yoghurt (serves per day). We further categorised dairy consumption based on fat content (full-fat or low-fat, serves per day). The Expanded Disability Status Scale (EDSS) was used to estimate disability at the same time points.⁽³⁾ We included participants with plausible total energy intake (3,000–21,000 kJ/day). A total of 210 participants ($n = 210$) aged between 18–57 years had complete data at all three time points and were included in the analysis. Negative binomial regression models using incident rate ratios (IRR) were used to test associations between dairy consumption and EDSS score. Covariates included in the original models were age, sex, study region, education, body mass index, total energy intake, omega-3 or vitamin D supplement use at baseline, physical activity, history of smoking, and history of infectious mononucleosis. Backward-step elimination of covariates at $p > 0.1$ was systematically applied and the final models were bootstrapped (500 replicates). There was no statistically significant association over time between total dairy consumption (serves per day) and EDSS score (adjusted model, IRR = 1.03, 95% CI [0.94, 1.12], $p = 0.534$). Similarly, we found no statistically significant associations between dairy consumption by product type or fat content and EDSS score. Our findings show that dairy consumption was not associated with disability progression in this cohort of people with MS. Future studies investigating associations between consumption of dairy products and other disease progression markers would help to strengthen the evidence in order to develop evidence based dietary advice targeted to people with MS.

References

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