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Impact of a Mediterranean diet on food cravings in an Australian population

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Food cravings are one of several important complexities between psychological and physiological triggers for food consumption. Cravings are commonly cited as contributing to over-consumption of hyperpalatable foods (sugary, salty, and fatty foods) and may be causal in obesity[(1)]. The Mediterranean dietary pattern (MedDiet) is linked to reduced disease risk and improved health and wellbeing[(2)]. Despite a lower intake of sugary and salty foods compared to a Western diet, free-living adults switching to the MedDiet find it satiating and achieve high adherence in Western countries. The MedDiet is known to improve mood and wellbeing, is high in fibre, monounsaturated fat and low in added sugar, and has a low glycaemic load, which could separately and synergistically reduce food cravings. The relationship between adherence to the MedDiet and food cravings has never been investigated. In the MedLey randomised controlled trial, we investigated the effects of a MedDiet on food cravings, compared with a habitual Australian diet (HabDiet)[(3)]. Adherence to the MedDiet was scored out of 15 (maximum adherence). Participants completed three food cravings questionnaires at baseline and 6-months. The State questionnaire measures momentary cravings and has a maximum score of 75, indicating maximum food cravings. The Trait-reduced questionnaire measures general cravings and has a maximum score of score of 126, indicating more frequent and intense cravings for foods. The Food Cravings Inventory (FCI) measures cravings for four food domains: fatty foods, fast foods, sugary foods, and high carbohydrate (CHO) foods. MedDiet group (n = 58) responses were compared with the HabDiet group (n = 53) across visits using linear mixed effects modelling. Predicted differences were obtained for adherence scores of ≤8 (median adherence) and ≥9. Means ± SD or CIs are presented. Mean adherence increased from 7.1 ± 1.8 to 10.7 ± 1.48 in the MedDiet group (P<0.01), with no change in the HabDiet group (P = 1.00). Trait-reduced scores were not significantly different between groups at 6-months (P = 0.11), although there was a 5.57-point reduction within the MedDiet group (CI −12.56, −1.96, P = 0.04). State score was significantly lower in the MedDiet group than the HabDiet at 6-months (−4.4 (CI −7.53, −0.39), P = 0.03), and was significantly lower than at baseline (−5.9 (CI −9.33, −0.24,) P = 0.04). There were no differences between groups for the four domains of the FCI (P>0.05). Cravings for sugary foods was significantly reduced within the MedDiet group (−0.26 (CI −0.46, −0.05) P = 0.01). The predictive modelling suggested moving from an adherence score of 8 to 9 was associated with lower cravings for sugar (−0.03 ± 0.01, P = 0.03), fast food (−0.04 ± 0.02, P = 0.02) and CHO foods (−0.05 ± 0.02, P = 0.02). These results are suggestive that higher adherence to a MedDiet could reduce cravings compared to the Australian diet and suggest that the MedDiet may specifically reduce sugar cravings. Further investigation is warranted, through observational and intervention trials.

Keywords: food cravings; Mediterranean diet

Ethics Declaration

Yes

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