

# Adoption of a short-term (4-week) vegan diet as part of ‘Veganuary’ significantly reduces nutrient intake in omnivorous participants

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Global campaigns promoting voluntary veganism are becoming popular. In 2022, 620,000 people worldwide pledged to implement a vegan diet for the month of January as part of ‘Veganuary’<sup>(1)</sup>. The nutrient intake of long-term vegans has been well researched<sup>(2)</sup>, however, little is known about the nutritional impact of implementing a short-term vegan diet as part of a social campaign.

This study aimed to evaluate the effect of a voluntary short-term (4-week) vegan diet, as part of ‘Veganuary’, on nutrient intake and status.

Data were collected over two years (November - January 2019–20 and 2020–21). Data were recorded before implementing vegan diets (baseline) and after completion of ‘Veganuary’ (post-intervention). Intervention groups included vegetarians and omnivores pledging to Veganuary (VegV and OV groups). Controls were vegans and omnivores continuing their usual diet (VV and OO groups). Dietary intake was estimated by three-day food diaries (FD), the EPIC-Norfolk Food Frequency Questionnaire (FFQ) (in 2019)<sup>(3)</sup>, and an iodine-specific questionnaire (in 2020). Nutrient adequacy ratios (NAR) were generated from dietary intake data and were compared to UK Dietary Reference Values (DRVs)<sup>(4)</sup>. Urinary iodine concentration (UIC), analysed by Inductively Coupled Plasma Mass Spectrometry (ICP-MS), measured iodine status according to World Health Organisation (WHO) criteria<sup>(5)</sup>. Free T4 (fT4) and Thyroglobulin (Tg) were measured by enzyme-linked immunosorbent assay (ELISA) as indicators of thyroid function. IBM SPSS and Genstat were used for statistical analysis. Significance was set to  $p < 0.05$ .

One hundred fifty-four UK adults (18–60 years) participated in the study (2019;  $n = 81$ , 2020;  $n = 73$ ). Short-term (4-week) vegan diets significantly decreased intake of saturated fatty acids (SFA) ( $p = 0.005$ ), cholesterol ( $p = 0.001$ ) thiamine ( $p = 0.001$ ), B<sub>12</sub> ( $p = 0.020$ ), and iodine ( $p < 0.001$ ) in omnivorous participants. Inadequacies in selenium, iodine, and vitamin D were observed in all dietary groups studied at baseline.

Short-term pledges to veganism significantly decrease nutrient intake in omnivorous participants. Individuals changing their diet as part of ‘Veganuary’ may benefit from nutritional advice and/or supplementation. Regardless of dietary preference, the intake of certain micronutrients is low in the UK population. Further investigation into the impact of short-term vegan diets is needed.

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