



## INTAKE AND ADEQUACY OF THE VEGAN DIET. A SYSTEMATIC REVIEW OF THE EVIDENCE.

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This systematic review investigated vegan diets in the European populations and their adequacy of macro-and micronutrient intake, compared to the recommendations of the World Health Organization. Included were 48 studies and their outcomes regarding protein, carbohydrates, fats and micronutrients summarized. The overall results and their impact on health are discussed in the later sections of the paper. Adequate intake amongst vegans was seen with carbohydrates, fats, Vitamin A, B1, B6, C, E, iron, phosphorus, magnesium, copper and folate. Sodium exceeded recommended intake, whilst protein, Vitamin B2, B3, B12, D, iodine, zinc, calcium, potassium, selenium was of low consumption in a vegan diet. The bioavailability of some nutrients was also acknowledged. In summary, following a vegan diet appears to have positive and negative aspects. A vegan diet profile can contribute to disease prevention with lower incidence rates of obesity, Type 2 diabetes, and cardiovascular disease. Yet veganism appears to increase the risk for mental health conditions, bone fractures, immune system impairments, anaemias and deficiencies from low nutrient intake. This review yields a comprehensive overview of the positive and negative health consequences of a vegan diet. It may be a useful reference for those looking to support vegans or individuals considering adopting a vegan diet pattern.

## VITAMIN AND MINERAL STATUS IN A VEGAN DIET.

Weikert, C ; Trefflich, I ; Menzel, J ; Obeid, R ; Longree, A ; Dierkes, J ; Meyer, K ; Herter-Aeberli, I ; Mai, K ; Stangl, GI ; Müller, SM ; Schwerdtle, T ; Lampen, A ; Abraham, K  
Deutsches Arzteblatt international. 2020;117(35-36):575-582

In recent years, the interest in a vegan diet, avoiding all foods of animal origin, has been growing steadily in Germany. The aim of this study was to provide first insights into the current micronutrient status in a vegan diet compared to an omnivorous diet. This study is a cross-sectional study which recruited 72 participants. The participants included 36 vegans and 36 omnivores aged between 30 and 57 years. Results indicate that: - the vitamin B12 status of vegans in this study was largely normal. - the majority of participants showed signs of undersupply of iodine which was more severe in vegans compared to omnivores. - ferritin levels and blood count changes in both groups were indicative of iron deficiency in every 10th participant in the study. - total cholesterol and low-density lipoprotein cholesterol levels were significantly lower in vegans compared to omnivores. Authors conclude that further larger longitudinal studies are required in order to gather up-to-date information about the nutritional and health status of a vegan population, which in turn would help in evaluating potential long-term health risks and protective effects.



## SYSTEMATIC REVIEW AND META-ANALYSIS OF THE ASSOCIATIONS OF VEGAN AND VEGETARIAN DIETS WITH INFLAMMATORY BIOMARKERS.

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A growing trend towards vegetarianism and veganism has emerged in the past few years. Evidence has led to the assumption that these diets may protect against chronic disease, and one potential mechanism is through the modulation of inflammatory biomarkers.

The aim of this review was to investigate the associations of veganism and vegetarianism with inflammatory markers. From the 21 cross-sectional studies included in this study, both vegan and vegetarian diets were associated with lower levels of CRP compared to omnivores. There was no association with all other inflammatory markers.

Based on these findings, the authors conclude there is evidence for both vegan and vegetarian diets reducing CRP, a major marker of low-grade inflammation. More research is needed as most inflammatory markers have only been investigated in single studies thus far.



## EFFECTS OF VEGETARIAN DIETS ON BLOOD PRESSURE LOWERING: A SYSTEMATIC REVIEW WITH META-ANALYSIS AND TRIAL SEQUENTIAL ANALYSIS.

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High blood pressure or hypertension is defined as systolic blood pressure of 140 mmHg or higher, and diastolic blood pressure of 90 mmHg or higher. It is an independent and major risk factor for cardiovascular disease and chronic kidney failure. The aim of this study was to determine the effect of a vegetarian diet on the reduction of blood pressure. This study is a systematic review together with trial sequential analysis. A total of 15 studies involving 856 individuals met the eligibility criteria and were included in the final analyses. Results show that a vegetarian dietary pattern significantly reduced systolic and diastolic blood pressure. Furthermore, dietary patterns based solely on plant sources are more effective in reducing blood pressure than other types of vegetarian diet which still include animal products or by-products, such as eggs and dairy products.

Authors conclude that vegetarian diets, especially vegan diets, reduce blood pressure when compared with omnivorous diets. Thus, suggesting that they may be crucial in the primary prevention and overall management of hypertension.

