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746 - VEGAN DIETS AND RISK OF BONE FRACTURE IN ADULTS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Resumen

Background/Objectives: The vegan diet is the most restrictive type of vegetarian dietary pattern, which excludes all animal products. An unbalanced vegan diet could lead to a potential risk of nutritional deficiencies in several nutrients, including vitamin D, calcium, and high-quality protein, potentially increasing fracture risk. This study aimed to systematically review and update the epidemiological evidence examining the association between vegan dietary patterns and the incidence of bone fractures in adults.

Methods: A systematic literature search was conducted in PubMed and Web of Science from database inception through October 2025. Five prospective cohort studies met the inclusion criteria and were included in the meta-analysis. Two investigators independently performed study selection, data extraction, and risk-of-bias assessment. Pooled relative risks (RRs) and 95% confidence intervals (CIs) were estimated using random-effects models. Study quality was assessed using the Newcastle-Ottawa Scale for observational studies.

Results: The meta-analysis included 5,432 participants and 231 incident fracture cases. Adherence to a vegan dietary pattern was associated with a 41% higher risk of bone fractures compared with meat-eaters (RR: 1.41; 95%CI: 1.06 to 1.88; I2 55.1%).

Conclusions/Recommendations: This meta-analysis highlights the importance of promoting and incorporating specific nutritional strategies to support bone health in

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vegan populations. These findings may contribute to the development of updated dietary recommendations, inform policymakers, and guide public health initiatives aimed at improving population health outcomes.

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