

This cross-sectional study investigated in young omnivores, lacto-ovo vegetarians, and vegans nutrient intake, body composition, physical activity, vitamin D status, and biomarkers of bone turnover. Body composition was similar in the three groups, but there were significantly higher PTH levels and concentrations of the bone resorption marker NTx in vegetarians than in omnivores. It is concluded that young adult vegetarians should reduce risk of bone loss by appropriate diet planning, sun exposure or vitamin D supplementation.

Generally, the manuscript is well-written and of nutritional and clinical importance. Nevertheless, there are some issues that have to be addressed.

- They used a body composition monitor which is typically used in daily life, but not for scientific research. They should at least provide some validation data for the device (imprecision, accuracy; results of Bland Altman plots in comparison to gold standards of bone and muscle measurements).
- Describe in more detail how recruitment of study participants was done.
- The hours of blood and urine sampling should be stated in the Methods section. Note that bone turnover markers show circadian variation, which may influence study results.
- The Introduction section is too long and should be shortened by one third.
- They should consider to combine Tables 3-5 to one table.
- Their conclusion of adequate sun exposure or vitamin D supplementation is not substantiated by this cross-sectional study. Delete this statement from the abstract.
- To become a feeling of the composition of the different diets, it would be helpful to present an additional table listing the major food components of each diet consumed by the study participants.
- Muscle and bone mass did not differ substantially between diet groups. Results are in line with the Utah paradigm of bone biology and they should refer to this relationship in the Discussion section (Schiessl et al. Bone 1998; 22:1-6).
- Line 29: replace 'industrialized countries' by 'high-income countries'.
- They may wish to refer to an umbrella review indicating that low protein intake increases the risk of hip fractures (Zittermann et al. Osteoporos Int 2023).