

Comment on “Effects of Black Chokeberry (*Aronia melanocarpa*) Supplementation on Oxidative Stress, Inflammation, and Gut Microbiota”

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Abstract: Not available



**The
Nutrition
Society**

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10.1017/S0007114525000133

The British Journal of Nutrition is published by Cambridge University Press on behalf of The Nutrition Society

Dear Editor,

We have read with great interest the systematic review titled "Effects of Black Chokeberry (*Aronia melanocarpa*) Supplementation on Oxidative Stress, Inflammation, and Gut Microbiota" by Kaczmarczyk et al (1). The authors provide a comprehensive overview of the multifaceted benefits of chokeberry supplementation. This work significantly contributes to our understanding of the potential health benefits associated with *Aronia melanocarpa*, particularly in its capacity to modulate oxidative stress, inflammation, and gut microbiota.

While the review is insightful, the inclusion of a sensitivity analysis based on study quality could provide deeper insights into the impact of methodological variations on the overall findings (2). This would enhance understanding of whether the health benefits observed are consistent across studies of varying rigour, offering a clearer picture of chokeberry's effects.

Further exploration into the dose-response relationship of chokeberry supplementation could also benefit the review. The authors note variability in effects based on dosage, suggesting that a detailed analysis could guide more precise clinical recommendations and inform future research on optimal dosing strategies. Additionally, incorporating information on the duration of follow-up for the studies reviewed would provide valuable insights, particularly since the long-term effects of supplementation are crucial for chronic conditions associated with oxidative stress and inflammation. This would aid in evaluating the sustainability and long-term safety of chokeberry supplementation. If data permits, conducting a meta-analysis would provide a quantifiable measure of chokeberry's effects across different studies, offering a more comprehensive insight into its health impacts. This analysis could also clarify potential heterogeneity among the results, which may be attributed to differences in study design, population, or supplementation protocols.

Integrating a Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) assessment could also enrich the study by providing a transparent evaluation of the confidence level in the effect estimates (3, 4). This approach is crucial for guiding clinical decision-making and the formulation of health guidelines. A GRADE approach would not only clarify the level of evidence supporting the findings but also highlight areas requiring further research.

Addressing these points could further enhance the validity and applicability of the review, broadening its relevance to a wider audience. The work done by Kaczmarczyk et al. is a valuable contribution to the field, and with these additional considerations, it could set a

foundation for future research directions and health policy formulations regarding dietary supplementation with black chokeberry.

Disclosure statement

- Ethical Approval: Not applicable
- Funding: Not applicable
- Human Ethics: Not applicable since no human participants were involved in this article
- Consent for publication: Not applicable

The authors report no conflict of interest.

Funding

No funding was received.

Authors contribution

RM, RS, AN critically and provided comments on methodological aspects, AN, SK written the edited the draft

Acknowledgments: None

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