Author’s response to reviews

Title: Characterization, dietary habits and nutritional intake of omnivorous, lacto-ovo-vegetarian and vegan runners – a pilot study

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Author’s response to reviews:

Point-by-point response to the comments made by the reviewers

We thank the editor and the reviewer for their kind comments and the opportunity to revise our paper. The comments and suggestions have helped to improve the manuscript substantially. In the following, each comment is addressed separately.

Editor Comments:

Discussion:

Sentence does not read well ‘the literature considers an adequate supply of athletes’ does not make sense. Please re-write - 339: The literature considers an adequate supply of athletes with all micronutrients through a balanced mixed diet, but it is unknown whether a vegetarian and especially VEG diet can provide all the important nutrients for athletes.

Response: We reworded the sentence.

342: The type, duration and intensity of sport determines the energy requirements.

Response: Done.
Why is this number relevant? Give context to 1.7. Is that in line with recreationally active, sedentary or trained? - 347: Our subjects trained an average of three times a week for about 60 min, which corresponds to an estimated physical activity level value of about 1.7 [34].

Response: We included the physical activity level to estimate the daily energy demand in comparison to the dietary intake. Since our subjects had primarily sedentary work and trained an average of three times a week for about 60 min, their estimated PAL is about 1.7.

Not all endurance athletes always want full glycogen stores – add ‘many’ - 354 Carbohydrates are the most important sources of energy and many endurance athletes strive to consume carbohydrates to benefit from full glycogen stores [41].

Recommended for who? This sentence needs to be referenced - 335: Depending on the intensity and type of training or competition, gender and external influences, an absolute amount of 3–7 g/kg BW is recommended for XXX type of athlete, training XXX per week.??

Response: We completed the sentence and added a reference.

Thus, participants in the present study achieved the recommendations for carbohydrate intake.

Response: We added a reference.

364: The ACSM and IOC recommend a range of 1.2–2.0 g/kg BW for (endurance) athletes [37, 38], and pay no attention to ambitious recreational athletes with no specific guidelines in place for recreational athletes.

Response: Done.

376: This is Our findings are consistent with the literature, 377 which has shown that non-athlete LOV and VEG appear to be within the range of 378 recommendations for protein intake [45, 49].
Sentence needs rewording. Suggest ‘Dietary recommendations for adequate fat intakes vary widely (references)’. Regarding adequate fat intake, the recommendations vary strongly between the sports societies.

Response: Done.

386: The PUFAs Polyunsaturated fatty acids play a pivotal role in health due to their precursor function as regulatory lipid mediators.

Response: As we have previously explained in the manuscript the abbreviation and it is commonly used, we would like to keep this.

390: The supply situation of Polyunsaturated fatty acid intakes in LOV and VEG within this the study collective can be classified as inadequate, which is a consistent finding with other studies regarding non-athlete vegetarians and VEG [52].

Response: Done.

Re-write sentence, suggest ‘There are no specific recommendations for micronutrient intakes in recreationally active individuals over and above that of general populations guidelines.’

400: For this specific group, there are no clear recommendations for micronutrient intake.

Response: Done.

Sentence needs referencing. 436: However, it is worth mentioning that an adequate vitamin D status can only be evaluated with the endogenous 25-hydroxyvitamin D status in the blood.

Response: Done.

What do you mean ‘still’ a critical nutrient? – 461: The present results show that calcium is still a critical nutrient [56].

Response: We wanted to express that the problem of a low dietary calcium intake is even relevant today. The word “still” is not necessary and we deleted it.
Explain this further or provide a reference - 464: The calcium supply of athletes should be improved (do you mean increased?) independently of dietary habits due to the importance of bone health, and normal nerve and muscle function.

Response: We meant that the dietary intake of calcium should be improved/increased. We provided a reference.

466: The mean intake of zinc was in within the reference range for all groups, although male LOV subjects were slightly below

Response: Done.

Non-SU what? Males, females, all participants?? Need to make sentence more clear and provide reference for ‘recommendations’ - 468: Female subjects participants and non-SU reached the recommendations (reference).

Response: Both, female subjects and non-SU of all three groups reached the recommendations. We added the reference.

Explain ‘losses’ – from sweat, urine, muscle metabolism? Provide reference - 488: However, the demand for several micronutrients might be higher for athletes due to increased losses.

Response: We already explained the way of losses earlier in the manuscript (line 451-454) and added a reference.

Is it worth noting that specific recommendations for recreational athletes may not be necessary and that general health guidelines may still apply to this population?? I personally think that general recommendations are more often than not, still relevant for those who are recreationally active - 490 Recommendations of current guidelines for an adequate micronutrient intakes of recreational athletes are sparse due to a lack of data.

Response: We included this aspect in our conclusion. We agree that low physical activities may not lead to increased requirements and that the recommendations for the general population apply. However, we believe that ambitious recreational athletes may have higher requirements than the general population, especially when exogenous factors such as heat occur. Neither the recommendations for high-performance athletes nor the recommendations for the general population seem to apply to this collective. Future studies should clarify if it is necessary to define specific recommendations for ambitious recreational athletes.
Reviewer reports:

A unique area of study that will contribute to the body of knowledge on dietary habits and nutrient intake of recreational runners. The authors should be commended.

Comments

1. Abstract line 30, remove…a…… after preferring.
Response: Done.

2. Line 46, be consistent in the use of either vitamin B12 or cobalamin.
Response: Done.

3. Line 46, the use of similarly gives the impression that participants in the previous statement achieved the recommended daily intake of some other nutrient.
Response: We used “additionally” instead of “similarly”.

4. Line 64, ….instead of ….as….i suggest you say ….as achieved.
Response: Unfortunately, we do not know what the reviewer means.

5. Line 77, vitamin B12 (Cobalamin), be consistent, in the abstract you use cobalamin whilst in the main text, you refer to vitamin B12.
Response: Done.

6. Line 96, however, there is lack of…..instead of ….a lack of.
Response: Done.

7. Line 121, how did you arrive at sample size of 81.
Response: As shown in Figure 1, 84 participants were eligible (n=28 per group). Due to 3 drop-outs, 81 subjects were included in the study. The 3-day dietary record was fulfilled and returned from 79 subjects.
8. Line 121, how was sampling of the 81 participants done?

Response: The recruitment was carried out in the general population of Hannover, Germany, via local running events, online running communities and social media. Interested persons fulfilled a screening questionnaire and, if all inclusion and no exclusion criteria were met, they were recorded and included in the study along with the respective age- and gender-matched persons of the other two groups.

9. Line 129, diseases of the gastrointestinal tract instead of ….disease regarding to the gastrointestinal tract.

Response: Done.

10. Line 132, food groups or food items? Did you adopt or they are arbitrary?

Response: The food groups were selected and adjusted based on the German Vegan Study (Waldmann, A, J W Koschizke, C Leitzmann, und A Hahn. „Dietary intakes and lifestyle factors of a vegan population in Germany: results from the German Vegan Study“. European Journal of Clinical Nutrition 57, Nr. 8 (August 2003): 947–55. https://doi.org/10.1038/sj.ejcn.1601629).

11. Line 139, better to clarify the concept of 3-day dietary record and ….including two week days and one weekend. Are they the same idea or different.

Response: Done.

12. Line 141, 79 out of 81 questionnaires returned implies that analysis was based on 71 questionnaires. Clarify this as later on the data analysis used 81.

Response: As depicted in Figure 1, 81 subjects participated in the study. Data of characterization (e.g. age, BMI, training habits and anthropometric data) was collected and analyzed of 81 subjects. Since two subjects did not return fulfill the 3-day dietary questionnaire, data on dietary and nutrient intake was recorded of 79 subjects.

13. Line 142, again food groups or food items…..what comes to the mind of an international reader is the standard 5 or 7 food groups.

Response: See comment 10: The food groups were adjusted based on the German Vegan Study.
14. Line 155, sentence ……were carried out lightly clothed ….is ambiguous. Please reconstruct.

Response: Done.

15. Line 171, data was normal or normally distributed?

Response: Normally distributed.

16. Line 173, with non-normal distribution or with non-normally distribution?

Response: Non-normal distribution.

17. Line 183, again was analysis based on 81 participants recruited or 79 questionnaires that were returned.

Response: The analysis of data on characterization was based on 81 participants and the analysis of dietary and nutrient intake was based on the 79 returned 3-day dietary records.

18. Line 190, instead of ……for 0.5 – 1 year ….say between 0.5 – 1 year.

Response: Done.


Response: Done.

20. Line 317, I suggest the authors remove the preamble to discussion and discuss the main findings i.e. characterization.

Response: Done.

21. 407, use of Eisinger et al., might not conform with journal guidelines. Check with guidelines.

Response: Done.
22. The authors can include a separate section on ...Study limitation.

Response: We already included a limitation section after the discussion.

Additional comments:

We updated the recommendations and references.