

Reviewer 2

The study provides contribution to the “food first” philosophy in sports nutrition, and the next step would be to provide a practical advice for athletes, also tested in a potential following study, more based on whole foods providing comparative benefits relative to commercial product.

Thank you for your comments on our research. We agree with a food first approach being the optimum approach and believe this paper is an important contribution to this philosophy.

- 3. Title: delete “food”, is not necessary, beverage is substantial description, what illness? delete, or be specific, football players instead of footballers**

Thank you for your comment. The title of the study has been altered to:

Combined Turmeric, Vitamin C and Vitamin D Ready-to-Drink Supplement Reduces Upper-Respiratory Illness Symptoms and Gastro-Intestinal Discomfort in Elite Male Football Players.

All mentions of the term ‘food beverage’ have been removed from the paper.

- 2. Abstract: indicate if a beverage is a commercial product, or specially designed for the study; express vitamin D amount in mcg instead of IU, add info for expected curcumin intake**

The abstract has been updated to detail that the supplement is commercially available. Vitamin D content in mcg has been added to the abstract. However, IU has been retained due to some countries and professions using IU as their standard metric. The estimated curcumin content has also been added.

Ammended abstract provided in full below:

Abstract: Elite football is associated with increased risk of illness, although targeted supplementation can reduce illness risk. This study assessed the effects of a supplement containing turmeric root within a black pepper and fat-soluble blend, vitamin C and vitamin D, on upper-respiratory symptoms (URS), gastro-intestinal symptoms (GIS), muscle soreness, markers of inflammation and gut permeability, in elite male footballers. Twenty-three footballers completed 3-weeks of no intervention (CON), followed by 16-weeks consuming a daily 60mL commercially available supplement containing raw turmeric root (17.5 g, estimated to contain 700 mg of curcumin), vitamin C (1000 mg), and vitamin D3 (3000 IU/75 mcg) (SUP). URS and GIS were measured daily. Immediately (0 h), 40 and 64 h after six competitive matches (two in CON, four in SUP), subjective soreness and plasma concentrations of creatine kinase [CK], c-reactive protein [CRP] and intestinal fatty-acid binding protein [I-FABP] were assessed. URS incidence ($P<0.001$), GIS ($P<0.05$) and plasma [I-FABP] at 0 h ($P<0.05$), were greater during CON versus SUP. At 40 h, [CRP] was greater than 0 h during CON ($P<0.01$), but not SUP ($P=0.204$). There were no differences in soreness or [CK]. This study indicates that supplementation with a turmeric root, vitamin C, and vitamin D food beverage over 16 weeks can reduce URS, GIS and post-match [I-FABP] in elite footballers.

- 3. Conclusion: add info for a duration of daily supplementation**

This information has been added. The conclusion now reads – “This study indicates that supplementation with a turmeric root, vitamin C, and vitamin D food beverage over 16 weeks can reduce URS, GIS and post-match [I-FABP] in elite footballers.”

4. 4. Provide details regarding what time of day, in relation to meals and training, the baverage was taken

The following information has been added to the method section:

The supplement was typically consumed in the morning, post breakfast prior to training.

5. Comment potential adverse effects, since 16 weeks of 1000 mg vit C and 75 mcg vit D is relatively high dose; add info about taking into account additional intake of vit C and D since cumulative amount could additionally increase the risk of adverse affects

The following has been added to the discussion to highlight potential adverse effects associated with high dose vitamin C and D supplementation. However, we have noted that no adverse effects were reported during the study:

“It should be noted that the vitamin D and vitamin C within the supplement was relatively high. It has previously been reported that excessive amounts of vitamin D and vitamin C can cause adverse side-effects including hypercalcemia [Marcinowska-Suchowierska et al., 2018] and GI distress [Jacob and Sotoudeh, 2002]. However, no adverse effects were reported in the present study.”

6. Can you add quotes from subjects, regarding feasibility, taste, acceptance, subjective perception, etc. regarding experienced chronic supplementation

Unfortunately we do not have quotes from the athletes, however, anecdotally we observed that the athletes were able to implement this supplement into their existing diet very easily.

We have a sentence in discussion which reads, “Anecdotally, participants attested to its user-friendly nature, describing it as “easy to consume” and reported no instances of gastrointestinal discomfort linked to its usage”.

7. Please additionally emphasize in “Conflict of Interest” (also correct to conflict)” that the authors (all), players, club management do/not have a relation with the manufacturer of the product

The conflict of interest has been updated. This now reads:

“For the duration of the study, no authors or participants had any financial relationships with the manufacturer of the product. The supplement for the study was provided by the Turmeric Company.”