Author’s response to reviews

Title: Hormonal aspects of overtraining syndrome: a systematic review

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Version: 2 Date: 13 Jan 2017

Author’s response to reviews:

Responses to reviewers.

Dear editorial team,

Thanks for the new reviews. All the comments and suggestions helped us improve the quality of the manuscript, particularly regarding the clarity of the exposed information.

Main changes:

1. We reordered the information and organized the data in a way that it became much easier to understand, giving the proper attention to the most important messages of this systematic review.

2. We also sent for an expert language edition service to avoid grammar and orthographic errors both the first and the current alterations we did within the manuscript.

3. Tables were changes in a way that became clear to read, and more percentages were exposed.
In the manuscript:

a. Sentences whose font is in green: changes or new information were done before the new review, but language edition was performed.

b. Sentences that are highlighted in “strong” green: new or changes sentences, that were also sent for language review.

c. Numbers highlighted in green: changes in numbers after a reassessment or new numbers after a new analysis (eg. According to the selected athletes, that we performed now, not before).

Below, specific answers to comments are highlighted after each reviewer comment.

Reviewer 1:

General comments:

Although the manuscript has been well developed and enriched by relevant information, it still suffers from its 1. lack of clarity, in particular in the presentation of results.

R. To turn the results more clear, we rewrote the results and organized into topics to turn the reading easier to understand and to assess the most important messages.

Specific comments:

2. Include ±SD values in the presentation of results (i.e. in percentages presented in the results section)
R. The format of percentages of responses (A, B or C, i.e., decreased, no change or increased) does not allow +-SD values once they are not a range of responses, but three responses.

3. The results section is very large, altering the clarity of your message. Indeed, we are a bit lost in the flow of information. Accordingly, I would suggest to gather the results by types of hormones or types of sports in order to facilitate the understanding. An alternative could be also to separate acute and chronic responses.

R. We reduced the size of the results section and left detailed information of the findings of each parameter to each of the tables. However, we left into the manuscript the most important information, and gave fluidity to the results section. It has been entirely rewritten.

4. A great number of very long tables are also presented and very difficult to understand. The potential reasons could be:

- too much abbreviations in tables
- too long tables
- too numerous
- the absence of real classification between studies in each table. Indeed, a 1st stage would be to order alphabetically the references in tables rather than presenting the studies randomly.

R.

The number of abbreviations in tables was significantly decreased, and except for the table 1, where every selected study is detailed (which is desired for every systematic review), all the other tables were simplified. With this, tables became smaller. Also, the number of details was importantly decreased, without loss of quality of the presented data. Once specification of the results for each type of hormone according to the performed tests are specified in other tables, results in table 3 were simplified.

Studies are presented in order of year of publication, and references were reordered according to table 1. Usually, systematic reviews require an order according to the year of publication in the main table with the selected studies.
As a whole, tables are now much easier to be interpreted.

Tables were doubled checked. Table 4 is actually table 3, but table order were completely changed according to the order of the manuscript.

5. Table 2: Gather the 2 tables in 1.

Rugby is written "Rugby" and not "Rugbi"

R. Rugby” was corrected in the manuscript and in tables, as well as other words, and we gathered the tables in “table 2”.

6. Table 1 and 3 can probably be combined in 1.

R. Once table 3 quantifies the results, we found unfeasible to combine tables 1 and 3 and to improve clarification at the same time. Once you read these tables again (table 3 is now actually table 8) you will notice that they became much easier to understand and clearer.

Associate Editor Comments

7. Abstract suggests 12 articles were included in the review, but 38 in the main body of the manuscript

R. Abstract was properly corrected.

8. The sentence on the 2nd page of the introduction “To date, no systematic reviews regarding hormonal aspects of OTS/NFOR/FOR have been conducted” can probably be removed, and the 1st sentence of the next paragraph edited to make the point that a starting point in identifying
which basal or stimulated hormonal markers are linked to the outcomes is a systematic review of the literature.

R. As suggested, the last sentence of the paragraph that starts in the 1st page and finishes in the 2nd page was removed. We changed the 1st sentence of the next paragraph in order to show the starting point as recommended.

9. Begin the discussion by restating the purpose of the study.

R. We changed the beginning of the discussion as suggested.

10. The conclusions would be strengthened by making reference to points raised in the practical application section of the abstract.

R. We improved the conclusions and also developed a final discussion section to summarize the findings.

11. Continue to check your spelling and grammar throughout the paper and avoid one sentence paragraphs.

R. We sent back to the language editing service that will pay attention to this. After we received back, we doubled checked in order to avoid errors.

Other comments:

a. We numbered the sections to improve clarity, specially in regards of the results.

b. In order to improve the results section, we removed the following sentences and wrote a more clear and easier-to-understand paragraph in the discussion section, once we found more appropriate to be in the discussion: “Justifications for the type of stimulation tests
were based on the fact that these tests mimicked real-life triggers of fatigue in athletes with OT/OR, although following standardized endocrine stimulation tests may be an important way to gain evidence on the role of hormonal dysregulation in OT/OR (3). All the studies that induced NFOR/FOR had to demonstrate a reduced performance of at least 10% in order to confirm NFOR/FOR in the studied athletes.”

c. We developed a diagram that summarizes the types of athletes and tests performed, which helps clarify the systematic review findings, once results are a little complex to be interpreted.

d. This systematic review is full of different information. Therefore, in order to improve clarity, we divided into sub-topics (not only numbered the previous topics) and left details for each of the tables.

e. We reordered the subsections, and excluded sentences that had the same meaning along the text. We read twice after the final version to evaluate if the manuscript presented an easy and natural “flow” of the lecture, and not to be tiring and unclear.