Author's response to reviews

Title: Resting heart rate: Its correlations and potential for screening metabolic dysfunctions in adolescents

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Author's response to reviews: see over
Reviewer's report
Title: Resting heart rate: Its correlations and potential for screening metabolic dysfunctions in adolescents
Version: 3 Date: 5 February 2013
Reviewer: Katrina D DuBose

Reviewer’s report:
Title: Resting heart rate: its correlations and potential for screening metabolic dysfunctions in youth
The authors did a good job addressing most of the comments raised by the reviewers. There are just a few more items to consider before publication.

Minor Essential Revisions
1. short title: add the work resting to high heart rate. As that is what is really measured not exercising heart rate.
   As solicited, the short title was modified.

Abstract
2. Page 2 abstract – conclusion: add resting before heart rate
   As solicited, this modification was performed.

Background
3. Page 3 2nd paragraph last sentence. This sentence is awkward; especially “been less investigated”. Suggest re-wording.
   As solicited, this modification was performed.

4. Page 4, purpose. Re-move “and to identify its correlation in pediatric populations… this is not needed as the added text above covers it.
   As solicited, this modification was performed.

Methods
5. Page 4 inclusion criteria: self-report of health. It would be more descriptive if the diseases that would exclude them would be given. Did they have to be free from asthma, Types 2 Diabetes, Type 1 diabetes, known cardiovascular disease, ADHD? They could have allergies and this is chronic, but may not exclude them from participating in the study.
   As solicited, the diseases were specified.

6. Page 5: Did the children give written assent? Not sure if this is done outside of the United State or not. If they did include that after talking about consent from the parents/legal guardian.
   All participants given your verbal consenting. This information was inserted at Methods.

7. Page 7. Potential Confounders. Add VO2max as confounder that was included in the analysis (see table 2). I’m still not sure why VO2max was not a confounder for the analysis in table 3, as aerobic fitness level has been shown to be inversely related to HDL and positively related to TC, LDL, triglycerides, and glucose levels.
   As solicited, this modification was performed.
Results
8. Page 9 2nd paragraph, 2nd sentence. Add positively before “…related to triglycerides, TC and glucose values.”
   As solicited, the diseases were specified.

9. 3rd paragraph, ROC curve. For HDL, wouldn’t you be more concerned about screening for low HDL instead of high HDL values? All other ROC analysis was reported to investigate factors related to CDV risk not protection and high HDL would be protective.
   Thank you for this comment. In fact, the outcome was “decreased values of HDL-C” instead of increased values. This typographical error was corrected.

Discussion
10. Page 10 1st sentence: add higher before RHR. Remove (linear regression model [Table2]). Not needed in the discussion.
   As solicited, this modification was performed.

   As solicited, this modification was performed.

12. Page 11. You did ask a question about sports participation and correlation analysis found an inverse relationship with aerobic fitness, but the relationship did not exist after controlling for potential confounders. But no evidence is given that sports participation was positively related to aerobic fitness (this could be done). Sports participation is one factor related to aerobic fitness, but not the only one there is also genetic factors that need to be considered, so this statement that sports in around about way is related to RHR and aerobic fitness is not correct.
   As solicited, the positive relationship between sport practice and cardiorespiratory fitness was inserted at Results Section. Moreover, in Discussion Section the above mentioned statement was excluded.

13. Page 14 2nd paragraph. Remove Freitas and insert change Junior to Júnior. Specify if the relationships they reported are positive or negative.
   As solicited, this modification was performed.

Conclusion
14. The results did not indicate that high RHR can be used to screen for alterations in lipid metabolism; only triglycerides were related. The conclusion statement is too broad and not supported by the results.
   As solicited, this modification was performed.

Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests: I declare that I have no competing interests
Reviewer's report
Title: Resting heart rate: Its correlations and potential for screening metabolic dysfunctions in adolescents
Version: 3 Date: 29 January 2013
Reviewer: Rima Chedid

Reviewer's report:
The authors have well revised their manuscript taking into account the three reviewers' comments. Now the manuscript looks definitely better. Nevertheless, I have some minor remarks regarding this new version.

Minor Revisions
1- In the Methods, Sample paragraph, please add an explanatory sentence describing your final sample size as you did in the Abstract section.
For this purpose, you can move at the end of the inclusion criteria sentence the first paragraph of the Results section as it describes with details your sample size and it does not belong to the Results: "Initially, 1396....... composed the sample."
   As solicited, this modification was performed.

2- The misspelling of the word CUFF into CUT OFF has lead to a misunderstanding. Now the text is very obvious.
   Thank you.

3- What does the letter F in the right upper corner stand for in Table 1? Mention it in the footnote.
   As solicited, this modification was performed.

4- Table 5 is much more reader friendly than the previous Figure 1. However, it is better to use the word BEST instead of the word BETTER when talking about cut-offs.
   As solicited, this modification was performed.

Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:
I declare that I have no competing interests.
Rima R. CHEDID.