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Higher blood pressure and lower cardiac vagal activity in obese young individuals in supine and seated position

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HIGHER BLOOD PRESSURE AND LOWER CARDIAC VAGAL ACTIVITY IN OBESE YOUNG IN SUPINE AND SEATED POSITIONS
Journal of Clinical and Translational Research

Dear Dr. Arsa,

One reviewer and the editor-in-chief have now commented on your paper. You will see that they are advising that you revise your manuscript. If you are prepared to undertake the work required, I would be pleased to reconsider my decision.

For your guidance, reviewers' comments are appended below. Please note that the editor provided a revised version of your manuscript in the attached document. You are kindly asked to continue working in this document when preparing a revision.

If you decide to revise the work, please submit a list of changes or a rebuttal against each point which is being raised when you resubmit your work.

Your revision is due by Dec 21, 2016.

To submit a revision, go to http://jctres.edmgr.com/ and log in as an Author. You will

see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely

Rowan van Golen
Associate Editor
Journal of Clinical and Translational Research

Reviewers' comments:

Reviewer #1: The study aimed to verify if overweight and obesity young people present alterations of hemodynamic parameters and of the heart rate variability (HRV) in supine and seated body positions, and to correlate with anthropometric variables.

Although the authors asked an interesting research question (however, the aim should be re-written since you correlated HRV and BP themselves, not just with anthropometric parameters) and the results are also very interesting as they found differences between degrees of excess body weight when compared to normal weight individuals (i.e., overweight versus obese individuals), the present paper needs major changes. In general, it is confusing which may be related to language issues. Thus, I strongly suggest an English revision of the entire text. I have pointed some issues, but there are many others that should be corrected in terms of language improvement.
Results need to be improved, mainly the tables structure and the need of some correlations. Effect sizes (Cohen's d) for comparisons and qualitative interpretation of correlations (according to Hopkins et al. 2009) are also recommended.
Discussion needs to be reorganized and focused on the results you have and avoiding too specific populations.

Introduction

Page 4, Line 21: I would be more specific here and say: The cardiac autonomic modulation (e.g. heart rate variability [HRV] measures) is influenced by… It seems that your references are all associated with HRV measures and not others that may be also associated with autonomic nervous system (e.g., pupillometry).

Page 4, Line 45, 46: It seems to have something wrong here, because reference 7 doesn't compare seated and standing position, they compared standing and supine positions. It is actually stated by yourself a couple of lines before. Moreover, it would be expected to find greater sympathetic activity in the standing position compared to the seated position.

Page 4, Line 46-48: This is confusing. What do you mean that is "increasing"?

Page 4, Line 55: You probably mean that high BMI and BP are associated with reduced HRV in obese individuals. Please, correct it in the text.

Page 5, Line 7: What do you mean by "enough developed physiological mechanisms to prevent these alterations"? Please, clearly provide which mechanisms you are referring.

Page 5, Line 14-19: Again, it is confusing. Is it unclear if overweight young people at early adulthood present worse cardiac autonomic modulation in terms of seated vs supine position? Or compared to eutrophic? Or to sedentary individuals? By reading your goals, we can see overweight people were compared to normal weight ones. However, your gap needs to be clearly stated before it.

Methods

Subjects section, line 50: Did you accounted for what medications specifically?
Line 53: When you say regular exercise program, do you mean formal programs? What if the participant was physically active in his/her daily routine (e.g., active work, active transportation, etc.)?

Page 8, Line 1: HF nu (i.e., normalized units) instead of un. The same thing in line 5. I believe it happens in other parts of the manuscript.

Statistical Analysis
What non-parametric test was used to compare position (paired test)?

Results
Page 8, Line 45: You did not explain what WC and AC stand for.

Page 8, Line 45: The sentence is very confusing. Are you saying that overweight participants presented higher waist and abdominal circumference than obese participants?

Page 9, Line 1: What is PT? Also, you need to clearly demonstrate that you are talking about position differences.

Page 9, Line 5: Were "less", do you mean they were lower?

Page 9, Line 19-24: I don't believe you need to show correlations between HR and HRV. It is expected to be inversely correlated (i.e., the higher is HRV the lower is HR). You do not actually need to correlate BMI with cardiac autonomic function, because you are comparing HRV indices according to the classified BMI. You suggest just presenting waist and abdominal circumference association with HRV and BP association with HRV.

Page 9, Line 24: positively correlated instead of correlated positively. It happened in other parts too.

Page 9, Line 52: I believe "proves" is too strong for this context. You need to smooth it.

Discussion
Page 10, Line 7: "intermediate state" doesn't seem to be an appropriate term for this context.

Page 10, Line 10: Higher SBP than…? Sometimes you use SBP, sometimes systolic blood pressure. There is no pattern. Sometimes, you said SPB, which seems to be a language mistake. It makes the text very confusing.

Page 10, Line 19: "In that presented" is incorrect.

Page 10, Line 24: when obese individuals were compared to their eutrophic counterparts. This is my suggestion for what you tried to say.

Page 10, Line 58: Although it is an interesting topic of research, it does not seem appropriate to bring techniques to stimulate vagal nerve to your discussion. It does not contribute to explain your findings. Moreover, you emphasize studies with very different populations than the one you study, such as subjects with heart failure and individuals with refractory epilepsy.

Page 11, Line 46: Why did you bring up the increase of carotid arterial stiffness? Is this because it is a common condition in obese individuals? You should better explain this.

Page 13, Line 1-9: Please, provide explanations about the reasons that supine position is worse than seated position. Should the saturation phenomena be considered?

Page 13, Line 19: What would be the point of assessing HRV while subjects changed position? Given the impact of obesity on HRV indices, I believe interventions should be recommended to improve this scenario.
Authors did not mention the limitation regarding small sample size, it should be considered. The effect size of between-group differences should be calculated as a complementary analysis.

Tables: They look very confusing too. Signs of difference are not clearly explained in the footnote.
P1 and P2 are also confusing in table 2 as well as the signs used to represent difference. For HR you should non-significant p values (0.26 and 0.20). For the other variables, you used "ns". Abbreviations are not explained in the footnote as well. They need major changes.
Table 3 p is in italic whereas it is not like this in table 4. Correlations should be qualitatively interpreted as suggested by Hopkins WG, Marshall SW, Batterham AM, Hanin J (2009). Progressive statistics for studies in sports medicine and exercise science. Medicine and Science in Sports and Exercise 41, 3-12.

Reviewer #2: editor-in-chief

Dear authors,

Please find my comments in the attached revised version of your manuscript. I kindly ask you to continue working in this version when preparing a resubmission. Further instructions are provided in this manuscript.

Thank you,

Michal Heger
Editor-in-chief

There is additional documentation related to this decision letter. To access the file(s), please click the link below. You may also login to the system and click the 'View Attachments' link in the Action column.
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2nd editorial decision
Date: 2-May-2017

Ref.: Ms. No. JCTRes-D-16-00025R2
HIGHER BLOOD PRESSURE AND LOWER CARDIAC VAGAL ACTIVITY IN OBESE YOUNG IN SUPINE AND SEATED POSITIONS
Journal of Clinical and Translational Research

Dear author(s),

Reviewers have submitted their critical appraisal of your paper. The reviewers' comments are appended below. Based on their comments and evaluation by the editorial board, your work was FOUND SUITABLE FOR PUBLICATION AFTER MINOR REVISION.

If you decide to revise the work, please itemize the reviewers' comments and provide a point-by-point response to every comment. An exemplary rebuttal letter can be found on at http://www.jctres.com/en/author-guidelines/ under "Manuscript preparation." Also, please use the track changes function in the original document so that the reviewers can easily verify your responses.

Your revision is due by Jun 02, 2017.

To submit a revision, go to http://jctres.edmgr.com/ and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely,

Rowan van Golen
Associate Editor
Journal of Clinical and Translational Research

Reviewers' comments:

Reviewer #1: The authors improved the manuscript, but there are still some minor concerns. They did not mention if the manuscript passed through an English review before resubmitting. It is an important issue.

Introduction
Page 6, lines 9-11: I would not say "aberrant", please use "reduced".

Discussion
Page 20, lines 12-14: Ok I get it, but you need a reference here. Moreover, the saturation

phenomena could be pointed out here (you can understand it better here:
Buchheit M (2014). Monitoring training status with HR measures: do all roads lead to Rome? Frontiers in Physiology, 5: 1-19).

Page 22, lines 16-18: please correct to "physical exercise".

Why "Acknowledgements" are in yellow color?

Reviewer #2: See attached Word document

There is additional documentation related to this decision letter. To access the file(s), please click the link below. You may also login to the system and click the 'View Attachments' link in the Action column.
********Authors response*********

Dear Editor and Reviewers,

We appreciate the opportunity to resubmit our manuscript titled "Higher blood pressure and lower cardiac vagal activity in obese young individuals in supine and seated position" for consideration and publication in Journal of Clinical and Translational Research. We have made a great effort to address the comments and doubts raised by reviewers. We are sure that the latest suggestions from the reviewers have strengthened the manuscript, and we hope it will be suitable for publication in this prestigious journal. The alterations in the text were highlighted in yellow (reviewer: 1 and 2) and in green (reviewer 3).

Regards,
Authors.

Reviewer comments

Reviewer #1:

The authors improved the manuscript, but there are still some minor concerns. They did not mention if the manuscript passed through an English review before resubmitting. It is an important issue.

Authors: This study did not have financing to pay for a translation or review of the English, because the Financing Institution does not allow some types of expenses. The main funding for this research was with scholarships for our undergraduate students. We are trying to insert these services of translate and review of English in from the next public announcement to financial support in our State. The value of service for review ($ 543) or translate is ($ 761) (R$ 1.835 and R$ 2.572). This amount corresponds to half

salary of a professor (federal university). To minimize this problem in future, the professors stimulate yours students to start the school of English language or to participate of new course of English offered by university free on the internet. Part of the authors of this study started the course in the last year, and the other part started in this year.

A teacher of language school made the review. This teacher lived in EUA, and we paid a symbolic price, divided between the authors. Besides that, one of ours authors reviewed the manuscript. This author had complete formation in English in our country and lived in the EUA during the doctorate.

We appreciated the contributions of each reviewer with the improvements in our manuscript.

Introduction

Page 6, line 8: I would not say "aberrant", please use "reduced".

Authors: We made the corrections. (*see* Page 6, Line 10)

Discussion

Page 20, lines 12-14: Ok I get it, but you need a reference here. Moreover, the saturation phenomena could be pointed out here (you can understand it better here: Buchheit M (2014). Monitoring training status with HR measures: do all roads lead to Rome? Frontiers in Physiology, 5: 1-19).

Authors: We believe that the saturation phenomenon is not a relevant factor for the lower sensitivity in the identification of autonomic alterations in the supine position of overweight and obese youngsters. The saturation phenomenon usually occurs when the RR intervals are greater than 1000 ms and / or the HR is less than 50 bpm (Buchheit et al., 2014; Kiviniemi et al., 2004), occurring mainly in highly trained individuals (Plews et al., 2012) and in healthy people during the sleep period (Kiviniemi et al., 2004).

References cited above

Plews, D. J., Laursen, P. B., Kilding, A. E., and Buchheit, M. (2012). Heart rate variability in elite triathletes, is variation in variability the key to effective training? A case comparison. *Eur. J. Appl. Physiol*. 112, 3729–3741. doi: 10.1007/s00421-012-2354-4.

Kiviniemi, A. M., Hautala, A. J., Seppanen, T., Makikallio, T. H., Huikuri, H. V., and Tulppo, M. P. (2004). Saturation of high-frequency oscillations of R-R intervals in healthy subjects and patients after acute myocardial infarction during ambulatory conditions. *Am. J. Physiol. Heart Circ. Physiol*. 287, H1921–H1927. doi: 10.1152/ajpheart.00433.2004.

Authors: We added a reference to the sentence. (*see* Page 19, Line 16): *The lower venous return in the seated position (due to the greater influence of gravity) may require more refined control of circulation compared to the supine position*[51].

51. Rodeheffer RJ, Gerstenblith G, Beard E, Fleg JL, Becker LC, Weisfeldt ML, et al. Postural changes in cardiac volume im men in relation to adult age. Exp Gerontol. 1986; 21(4-5):367-78.

Page 22, lines 16-18: please correct to "physical exercise".

Authors: We made the correction. (*see* Page 21, Line 20)

Why "Acknowledgements" are in yellow color?

Authors: We corrected this mistake. (*see* Page 21, Line 23)

Reviewer #2:

Abstract

- Change relevance for patients to:

The monitoring of HRV in obese subjects in seated position allows improved prognosis of metabolic consequences to cardiac autonomic control.

Authors: The relevance for patients was modified as suggested. (*see* Page 4, Lines 9 and 10).

1. Introduction

- Why are only statistics reported for men, and not women?

Authors: Women can present the most decreases in thoracic fluid volume than men when adopted the seated position. The men has larger systolic volume than women in all positions (supine, sitting and standing), but when the men switch to a seated position, their systolic volume reduces more (in absolute value) than women, because the men also has the most increase in heart rate when seated (Frey et al., 1994). These differences in hemodynamic adjustments between men and women in different positions could affect the understanding of the results if both genders had canned been evaluated together.

Reference

Frey MA, Tomaselli CM, Hoffler WG. Cardiovascular Responses to Postural Changes: Differences with Age for Women and Men. J Clin Pharmacol. 1994; 34(5):394:402.

- Last word of first paragraph (ENREF 3) seems to be a glitch in the reference software. Please correct here and throughout the manuscript.

Authors: Solved.

- Please write ‘e.g.’ as ‘e.g.,’ and remove the word “measures” after [HRV] in the first sentence of second paragraph.

Authors: Corrections were made as required (Page 5, Line 12).

- After having abbreviated heart rate variability, please use the acronym in the remainder of the text.

Authors: We use the abbreviation in the remainder of text as suggested.

- “Accordingly, the elevated cardiac sympathetic activity in a seated10 or standing positions8:” positions should be singular (after “standing”).

Authors: We changed “positions” to “position” (Page 5, Line 21).

- Remove comma after …instead of integrative physiology (3rd paragraph).

Authors: We removed comma after “instead of integrative physiology” (Page 6, Line 5).

- Insert comma after hemodynamic in “The relationship between cardiac autonomic, hemodynamic and anthropometric parameters…” (last paragraph).

Authors: We inserted comma after hemodynamic in “The relationship between cardiac autonomic, hemodynamic and anthropometric parameters…” (Page 6, Line 18).

- The last sentence should read: The outcomes of this study assist in determining the effect of obesity-related metabolic complications on cardiac autonomic control.

Authors: The last sentence has been modified as requested (Page 6, Lines 19 and 20).

- Please change “indexes” to “indices” throughout the manuscript.

Authors: We changed “indexes” to “indices”.

2. Methods

- The sentence “The inclusion criteria were: (1) male gender, (2) respond to an anamnesis containing information on the family history, presence of diseases, use of medications and level of physical activity showing good health, aside from being overweight or obese, and (3) the subjects were non-trained; i.e., the subjects did not engage in regular exercise (performing a weekly routine containing at least two exercise sessions for a period longer than 30 days) for at least 4 months prior to the start of the study” should read (you may copy/paste):

The inclusion criteria were: (1) male gender, (2) willingness to provide information on family medical history, disease status, and use of medication during an anamnesis, (3) exhibiting physical activity reflective of otherwise good health (aside from being

overweight or obese), and (4) the subjects were non-trained. A trained state was defined by engaging in regular exercise (performing a weekly routine containing at least two exercise sessions for a period longer than 30 days) for at least 4 months prior to the start of the study.

Authors: The sentence was inserted as suggested. (Page 7, Lines 3-8).

- In Figure 1, a hyphen should precede “Circumference” and the hyphen should be removed before waist and abdominal. “waist” should be written with small case ‘w.’ Supine e seated should read “supine and seated.”

Authors: Figure 1 was adjusted as requested.

- In section 2.2, the sentence “Subjects were instructed to eat 2 h before the beginning of procedures and to avoid physical exercise and stimulating foods and drinks such as alcohol and caffeine, and dietary supplements that affect the cardiovascular system and hemodynamics during 24 h prior to their visit to the laboratory” should read (you may copy/paste):

Subjects were instructed to eat 2 h before the beginning of procedures and to avoid physical exercise, stimulating foods and drinks such as alcohol and caffeine, and dietary supplements that affect the cardiovascular system and hemodynamics during 24 h prior to their visit to the laboratory.

Authors: The sentence was inserted as suggested (Page 8, Lines 6-9).

- Section 2.2: insert comma before “…even after adjusting for BMI and several…”

Authors: We inserted comma as suggested (Page 9, Line 2).

- The sentence “The change of position was performed immediately after the measurements of the other” should read (copy/paste):

The position was changed immediately after completing measurements in the first position.

Authors: The sentence was inserted as suggested (Page 9 Lines 11 and 12).

- Section 2.4: between-group differences should be changed to ‘inter-group differences.’

Authors: We changed the sentence as suggested (Page 11 Lines 10).

- Section 2.4: please use a comma (called the Oxford comma) in a summation of 3 or more items: so …0.5, 0.7, and 0.9 for small… Correct this throughout the manuscript. The importance of the Oxford comma is illustrated here:

http://edition.cnn.com/2017/03/15/health/oxford-comma-maine-court-case-trnd/

Authors: We inserted comma in a summation of 3 or more items as requested.

- Section 2.4: please remove the 'Inc' behing GraphPad Software.

Authors: We removed the "Inc" (Page 11, Line 4).

- Section 2.4: briefly indicate how the d statistic belonging to Cohen's measure of effect size should be interpreted. This is not a standardly used statistical test, so you should inform the readers.

Authors: We inserted an explanation indicate how the d statistic belonging to Cohen's measure of effect size should be interpreted (Page 11, Lines 11 and 12).

3. Results

- Table 2: the significance of superscript a, b, and c needs to be clearly explained. For age the groups have a superscript a, while for waist the superscript is a, b, and c. This needs to be clarified in the Table's footnote. Also indicate in the footnote which statistical test was used.

Authors: We indicate in the Table's footnote the statical test used and explained the superscript text (Page 12, Lines 5-6; Page 13, Lines 3-6; Page 15, Line 1-3).

- Section 3.2: please add comma before respectively (first paragraph).

Authors: We inserted comma as requested (Page 13, Line 13-18).

- Table 2: please indicate which statistical test had been used in the footnote.

Authors: We indicate which statistical test had been used in the footnote (Page 12, Lines 5-6).

Section 3.3: first sentence should is presented instead of in presented. In the ensuing sentence, please change to: "There was a moderate-to-large positive relationship…"

Authors: Corrections were made as suggested (Page 14, Line 4).

- Section 3.4: second sentence contains a reference manager error again.

Authors: Solved (Page 16, Line 10).

- Section 3.4, second paragraph corrected section: change to "where a positive relationship was found".

Authors: We changed the sentence as suggested (Page 15, Lines 13).

- Section 3.4, third paragraph: change to "…parameters were inversely correlated (moderate to large) with…"

Authors: We changed the sentence as suggested (Page 15, Line 16).

4. Discussion

- The sentence "These individuals exhibited higher SBP and HR and lower HRV and cardiac vagal activity when were compared to their eutrophic counterparts9,27,28_ENREF_19_ENREF_20" should read:

These individuals exhibited higher SBP and HR and lower HRV and cardiac vagal activity when compared to their eutrophic counterparts[9,19,20,27,28].

Authors: We changed the sentence as suggested (Page 17, Line 4).

- Please correct "…who displayed lower HRV and cardiac vagal activity in supine position[27- 29]._ENREF_23 Obeses middle-aged adults had…" to: who displayed lower HRV and cardiac vagal activity in supine position[23,27- 29]. Obese middle-aged adults had

Authors: Solved.

- The third paragraph should read as follows (make sure you adopt all the modifications correctly, as you should do with all the other comments above):

Studies suggest that the activity of cholinergic anti-inflammatory mechanism mediated by the vagus nerve could be evaluated by HRV[31,32]. Corroboratively, the CARDIA study[33] found that HRV in seated position is inversely associated with a proinflammatory state in young adults. In obesity, the reduction in vagal activity and its cholinergic anti-inflammatory action may imply an increase in inflammation and metabolic complications[34]. In addition, the increase in SBP and DBP was associated with decreased vagal nerve activity in seated position in our study. Cardiac vagal activity has an important function in hemodynamic homeostasis, as evidenced by compromised BP stability in the absence of cardiac vagal activity[35]. These findings may explain, in part, that cardiac vagal activity is negatively associated with insulin, glycemic and lipid profiles, SBP, DBP, and HR in different groups and pathologies [11,15].

Authors: We corrected the sentence as suggested (Page 17 Lines 9-18).

- Correct the ENREF 43 in the fourth paragraph.

Authors: Solved.

- Right after the previous correction, change …importance of vagal activity in the treatment… (not for treatment).

Authors: We changed the sentence as suggested (Page 18, Line 1-2).

- Change the first sentence of the fifth paragraph to:

Although the young obese subjects had lower cardiac vagal activity, adjustments in autonomic cardiac modulation following the change in body position were observed between groups, corroborating results found…

Authors: We corrected the sentence as suggested. (Page 18, Lines 3-5).

- 5th paragraph: …due to lower venous return that results in … and increased sympathetic nervous activity, …

Authors: We corrected the sentence as suggested (Page 20, Line 1).

- 6th paragraph: change first sentence to "The change from supine body position to standing body position leads to baroreflex adjustments that result in decreased vagal nervous activity and increased HR41.

Authors: We changed the sentence as suggested (Page 18, Lines 10 and 11).

- 6th paragraph, second sentence "Similar adjustments in autonomic modulation from baroreflex stimulate, therefore in minor scale should occur with the change from supine body position for seated body position as verify in our study through SD1, pNN50, LF n.u. and HF n.u. indexes in all groups" makes no sense and should be rewritten in comprehensible English. I am sorry, but it is difficult to even extrapolate what you mean.

Authors: We rewrote the sentence to make it clearer (Page 18, Lines 11-15).

"The magnitude of adjustments in autonomic modulation obtained in this study (SD1, pNN50, LF n.u., and HF n.u. indices in all groups), and probably in baroreflex control, can be lower with the changed of seated to supine position than the adjustments obtained to the changed of the standing to supine position, for example".

- 7th paragraph should read: "Our results appear to demonstrate loss of baroreflex sensitivity in overweight and obese young people with changing body position. However, SD1, SD2, RMSSD, and pNN50 were lower in seated position in obese individuals compared to eutrophic individuals. These findings may be related to decreased/lossed baroreflex control, reducing the cardiac vagal activity42, and worsen with increased carotid arterial stiffness[42-44]. Given that baroreceptors are mainly stretch receptors, carotid arterial stiffening, a common condition in obese individuals43, may reduce the stimulation of baroreceptors in response to changes in BP in consequence to the lower arterial compliance[1,42-44].

Authors: We corrected the sentence as suggested (Page 18, Lines 16-23).

From here onward I copy/pasted your text because it was too tedious to spell out every individual mistake that had been made. Please literally use my text to improve the manuscript:

Authors: We use your text to improve the manuscript as suggested. Thank you very much.

Reviewer #3:

What does this difference in temperature refer to? Or is it a temperature range for all experiments?

Authors: It is a temperature range for all experiments. We add this information.

Next, participants were randomly asked to maintain a supine or a seated position in a silent and climatized room with a range of 22 °C and 25 °C for all experiments (Page 9, Line 3).

Please make sure the use of capitals is consistent throughout the table: either all first words of a sentence should start with caps or none of them (Table 1).

Authors: The adjustments were performed as request. (Page 10, Line 12).

Please, replace “were” by “are” and insert the “are” before “medium” and “large”.

Authors: The adjustments were performed as request.

Cohen[24] suggested that effect sizes of 0.2-0.49 are small, 0.5-0.79 are medium, and ≥0.8 are large. (Page 11, Line 12-13)

Please, insert comma after “very large”.

Authors: The adjustments were performed as request.

…moderate, large, very large, and extremely large correlation coefficients were used. (Page 11, Line 16).

Please use the proper and full name of the statistical tests in the table legends.

Authors: The full name of each statistical test used was inserted. I need to insert the One-Way Anova with Bonferroni post hoc test in Statistical Analysis section. Two types of ANOVA were used: One-way in the Table 1 to compared the general characteristics between 3 groups, and Mixed in the table 2, because there are 2 body body positions and 3 groups.

To assess differences between experimental groups was used One-Way ANOVA with Bonferroni post-hoc test. (Page 11, Line 7 and 8).

**One-Way ANOVA with Bonferroni post-hoc test; #Kruskal-Wallis test with Dunn's post-correction. Different letters indicate intergroup differences to the same variable with $p \leq 0.05$. $a \neq b \neq c$. (Page 12, Line 5)*

Mixed repeated measures ANOVA with Bonferroni post-hoc test. (Page 13, Line 3).

It's probably me, but I don't fully understand what this means. The letters indicate intergroup differences, but which letter refers to which group or groups?

Page 13, Line 5: a ≠ b ≠ c

Authors: The different letters in the same variable indicate differences between groups. These letters does are not fixed to each group, because when there are not differences between groups, the same letter is used (a=a; b=b; c=c). As example (table 2): Body Mass: Eutrophic is different of overweight and obese, but non-differences were observed between overweight and obese ("a"≠ "b" and "b" is not different of "b"). Other example: Waist: Eutrophic is different of overweight and obese, as well as, overweight is different of obese. Please let me know if you need more explanations.

Remove "supra-renal" on Page 20, Line 13: aldosterone by the supra-renal gland…

Remove underline on Page 21, Line 5. blood flow[29], and endothelial function[56]

Authors: The adjustments were performed as request.

…blood flow[29], and endothelial function[56]. In our study… (Page 21, Line 5)

…aldosterone by the gland…

3rd editorial decision
Date: 5-Jun-2017

Ref.: Ms. No. JCTRes-D-16-00025R4
HIGHER BLOOD PRESSURE AND LOWER CARDIAC VAGAL ACTIVITY IN OBESE YOUNG IN SUPINE AND SEATED POSITIONS
Journal of Clinical and Translational Research

Dear authors,

I am pleased to inform you that your manuscript has been accepted for publication in the Journal of Clinical and Translational Research.

You will receive the proofs of your article shortly, which we kindly ask you to thoroughly review for any errors.

Thank you for submitting your work to JCTR.

Kindest regards,

Rowan van Golen
Associate Editor
Journal of Clinical and Translational Research

Comments from the editors and reviewers:

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