Author's response to reviews

Title: Effect of Head and Limb Orientation on Trunk Muscle Activation During Abdominal Hollowing in Chronic Low Back Pain

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Editor's comments:
Hi Dave, the statistician has finally returned her report so you should get an email from BMC soon. She recommends that you provide p-values. So I would like you to include p-values in a final paragraph of the Results section, e.g. p-values ranged between xx-xx, and then also in a limitations section prior to the conclusion add a couple of lines about the statistics you did versus more traditional p-value based statistics. I shouldn't be much work, but then I can give the acceptance before the Christmas holidays.

Authors' response: We have added the following section as requested.

Results
Statistical significance can be inferred from the 95% confidence limits. If 95% confidence limits cross the zero, the mean must have a p>0.05, because the lower limit is less than zero while the upper limit is greater than zero. If, however, the 95% confidence limits in the figures are both on the same side of the zero, the mean has a p<0.05 (Figures 2-3).

Limitations section
The expression of our results may not be familiar to all readers. We purposefully omitted p-values and discussion of statistical significance. While both p-values and 95% confidence limits can be used to infer statistical significance (see last paragraph of results section), 95% confidence limits are much more information-rich to the clinician. The p-value only represents the probability of the mean response to a treatment not being zero. Concluding that a mean was “unlikely to be zero” is not a clinically useful conclusion because it does not express the variability in responses in clinically meaningful units. However, expressing results using a mean in conjunction with upper and lower confidence limits allows clinicians to easily interpret the likely effects they can expect from an intervention.