Reviewer's report

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

Version: 3 Date: 17 December 2013

Reviewer: Birthe Thomsen

Reviewer's report:

The authors have answered most of the questions appropriately and made satisfactory changes in the paper. The only exceptions are the responses to Comment 2 and Comment 3 in the previous review.

Major Compulsory Revision:

Ad Comment 3:

The authors still do not provide the degree of evidence for the presence of any effect at all. This is measured by the p-value for the test of the null hypothesis of no effect, which therefore must be added to the paper. The authors’ current approach is a very valuable consideration of the potential clinical significance of the treatment, but that is not a stand-alone consideration. False scientific results are far too big a problem in the scientific community in general, and they are very hard to get rid of. The authors must therefore provide the traditional p-value of the null hypothesis so the readers can judge for themselves whether they think that the paper presents convincing evidence of any effect at all of the treatment.

These traditional p-values should not replace the current approach. Statistical significance is not a stand-alone consideration either. It is important that both approaches are presented.

Minor Essential Revision

Ad Comment 2:

It is a common, but incorrect assumption made by, e.g., many epidemiologists that matching implies that you should not adjust for the matching variables. On the contrary, the analyses should be performed adjusted for the matching variables. In many cases, this will not change the results, but if it does, the adjusted analyses give the correct results.

The matching variables should be included as adjustment factors irrespectively of their corresponding nominal p-values. It is meaningless to evaluate the statistical significance of matching variables.