Author's response to reviews

Title: Kinetic and kinematic differences between Deadlifts and Goodmornings

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Author's response to reviews: see over
Point by point response to the Reviewer’s comments:

First of all, we would like to thank the Reviewer for his useful comments. They helped to clarify the manuscript!

Reviewer’s report
Title: Kinetic and kinematic differences between Deadlifts and Goodmornings
Version: 2 Date: 7 November 2013
Reviewer: Gerwyn Hughes
Reviewer’s report:
- Minor Essential Revisions
The revised version of the manuscript shows considerable improvements therefore the authors should be commended for carefully addressing the comments from the previous review. All comments made on the previous review of this paper have been well addressed by the authors except one in relation to the calculation of joint moments.

1. The authors say that inverse dynamics were used to calculate joint moments and later say that a quasi-static model was used. These techniques are different since inverse dynamics uses segment accelerations to calculate resultant joint moments which are not considered when using a quasi-static model. Inverse dynamics is the most appropriate method available to calculate resultant joint moments but in situations where the segment accelerations are low (as would be the case in the movements performed in this study) a quasi-static model is a suitable estimation of joint moments. Therefore the authors need to clarify the techniques used (i.e. remove reference to inverse dynamics if this was not the technique used) and justify why the quasi-static technique was used if this was the case.

It has been added to the abstract:
“… an inverse dynamics approach with a quasi-static solution was used to calculate…”

It has been clarified in the method section:
“The external joint moments in the sagittal plane were calculated using an inverse dynamics approach with a quasi-static solution [28], taking the ground reaction force and kinematic data into account [29], and normalized to BW [30]. The flexion / extension moments at the knees and hips were averaged over both limbs. The inverse dynamics included the position of the joints, the forces acting on each foot, and the gravitational force of the segments [30]. Due to slow accelerations of the segments during these exercises, the inertia forces were neglected.

Including two new references.

2. Abstract, line 19-20: there seems to be a typing/grammatical error in the sentence ‘the resulting sagittal in the knee was an external.....’. Please revise this sentence.

This sentence has been corrected:” For DLs, the resulting sagittal moment in the knee was an external flexion moment, whereas during GMs an external extension moment was present.”
3. Please check all referencing in the text and reference list to ensure it conforms to the journals guidelines.

The references have been checked using endnote and the style “biomedicalcentral”

4. Line 138; The word 'Rumanian' should be spelt 'Romanian'.
The word has been changed accordingly.