Reviewer's report

Title: Classification of the midfoot; neutral, low arched or high arched

Version: 1 Date: 9 June 2011

Reviewer: George S Murley

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REVIEWER'S REPORT
Title: Classification of the foot; neutral, low arched or high arched
Version: 2 Date: 8th June 2011
Reviewer: George Murley

This study collected foot posture measurements from a relatively large cohort of adults. This data would then allow the investigators to quantify and objectively classify the distribution of foot posture among working adults in Central and Northern Denmark. A secondary aim was to investigate the relationship between hours worked, age and other anthropometric characteristics compared with the foot posture measurements obtained.

1. Is the question posed by the authors new and well defined?
   Partially

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?
   Yes

3. Are the data sound and well controlled?
   Partially

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Yes

5. Are the discussion and conclusions well balanced and adequately supported by the data?
   Partially

6. Do the title and abstract accurately convey what has been found?
   Yes

7. Is the writing acceptable?
   Partially
MAJOR COMPULSORY REVISIONS
(which the author must respond to before a decision on publication can be reached)

There are several grammatical and formatting errors throughout the manuscript (including incorrect formatting of references).

The underlined section of the following comment was not adequately addressed in the author’s response to my first review (previously comment #6):

1. The final part of the introduction raises issues with ‘visual’ methods of foot classification. While I think some of these issues are fair ones, some arguments are based on old/out-dated references. There is a missed opportunity to incorporate well-recognised and current techniques (i.e. the Foot Posture Index). Relating to this issue, the authors have not acknowledged in either the Introduction or Discussion that there is already published work reporting ‘normative’ data for human foot posture, such as:
   • Thomas JL, Kunkel MW, Lopez R, Sparks D. Radiographic values of the adult foot in a standardized population. Journal of Foot and Ankle Surgery 2006;45:3-12.

2. The authors have acknowledged in their response that normalising measures of arch height is important; especially since they have also shown foot length significantly influences arch height alone. So why don't they include a table showing ‘cut off values’ for ‘normalised’ navicular height, so that the reader can use these values to inform future research design?

3. Page 1 — Introduction. The comment that prospective studies cannot be conducted without cut off values does not seem accurate. Prospect studies could include continuous measures and correlate occurrences of injury with foot posture, that is, without dichotomising foot posture into distinct groups.

4. Page 5 – Results section. Pooling data from the left and right leg/s (i.e. ‘double dipping’) is problematic because it violates the assumption of independence with the statistical analysis. Refer to the article by Menz below.

Menz HB. Two feet, or one person? Problems associated with statistical analysis of paired data in foot and ankle medicine. Foot 2004;14:2-5.

5. Page 7 — second paragraph. The finding that age has no clinically significant affect on foot posture is an important finding/issue, and is not in agreement with other research. Again, the authors should refer to the work of: Redmond AC, Crane YZ, Menz HB. Normative values for the Foot Posture Index. Journal of Foot and Ankle Research 2008;1:1-6
**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**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'