Reviewer’s report

Title: Coordinative Variability and Overuse Injury

Version: 1 Date: 9 November 2012

Reviewer number: 1

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Minor Essential Revisions

General Comments

This paper introduces the concept of coordinative variability and its potential application in identifying injury. It is a well written paper, explaining the importance and difference in end-point and coordinative variability in a simple and clear manner. Solid evidence is provided to support the proposed hypotheses. Several methods to measure variability were described. Such information will be useful to researchers and clinicians to better understand human movement function and overuse injury.

It will be beneficial to the readers if the authors can provide more insights into how to determine the threshold (e.g. how much is too much? How low is too low?). The limitations associated with it (e.g. highly dependent on the subject group, methods used, type of injury, etc.) should also be discussed. What is the next step to take for researchers to advance from here?

At the moment, the paper is strangely organized into two main parts: Introduction and Conclusions. More appropriate sub-headings are recommended, especially for the methods and approaches to measuring variability. While the board word ‘injury’ is used in the title, most studies and examples given in the paper are on ‘running injuries’. Perhaps a more specific title will help future readers to better grasp the scope of this review paper.

Specific comments

1. Consider re-phrasing this sentence without repeating the same words (knee, injured/injuries, runners) within a sentence “The knee, leg and foot are the most frequently injured by runners with knee injuries reported by approximately 45% of runners.”

2. What is (ref) here? 3) running footwear (ref).

3. The use of ‘however’ in this sentence disturb the flow “For the most part, however, the traditional kinematic and kinetic analyses have provided definitive results in that they have distinguished between runners with and without injuries and between healthy and injury-prone individuals”

4. Please define all symbols in an equation [e.g., x(n), x(n+)]

5. Figure 2 – the caption does not explain the figure in a simple way. Please
define all symbols. What do the x- and y-axes mean?
6. Figure 3 – the caption is not self-explanatory. Please also define and explain all the acronyms and symbols used in the figure.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.