Reviewer's report

Title: Neuromuscular training to enhance sensorimotor and functional deficits in subjects with chronic ankle instability: A systematic review and best evidence synthesis

Version: 1 Date: 22 February 2011

Reviewer number: 1

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I very much enjoyed reading this review. General comments include: timely and detailed review of the evidence. I agree that it would be erroneous to perform meta-analyses on these data. The search strategy is suitable and to my knowledge is sensitive to articles in this area. The rating of methodological quality and best evidence synthesis is also suitable.

There are no major compulsory revisions. Below are minor revisions and some discretionary revisions which the author should consider.

Minor essential revisions are as follows:

Title:
Instability - spelling

Page 6, line 1: - should read - 'Functional instability of the ankle joint refers to...... remove 'is'

Discussion, 1st para, last line: - rephrase the following 'However, for none of the outcome measures strong evidence in favour of neuromuscular training was found' There is at least one other area of the manuscript which includes this phrase and should also be revised.

Figure 1:
Specify the reasons why n=12 articles were excluded from full text. This could be added into the relevant box on this figure.

Table 2 would benefit from adding confidence intervals in the two effect size columns (between group and within group). Also was a little confused on studies with insufficient data - I can see instances where SD's are lacking, however does this mean that these studies did not even report 'no significant effect'

Table 3: - Full explanations of SI and MES should be added to the footnotes

Discretionary revisions are as follows:
The results are nicely sub-grouped by outcome measure, however where possible, this section would also benefit from including the best evidence
synthesis statement as a subheading or underlined phrase at either the end or the start of each subsection.

There is alot of information / words in Tables 4-7 which is related to the amount of work that has gone into this review; i wonder whether these tables could be modified to reduce the number of words and abbreviations and provide a more succinct summary. My suggestions are to A) consider using shading or bolding to highlight the most important areas or outcomes eg. where there is evidence of effect or evidence from a high quality study? also could numbers 1-4 be used for van Tulders best evidence synthesis or B) consider putting some of this informatin into a series of forest plots; the best evidence synthesis could be incorporated into the Forest plot title; this would package and compress alot of the information in these tables in terms of the numbers of studies, effect sizes and study quality.

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

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