Reviewer's report

Title: Exercise therapy for bone and muscle health - an overview of systematic reviews

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Reviewer: Manuela Ferreira

Reviewer's report:

The paper aims to summarize the available evidence on the effectiveness of exercise for a number of musculoskeletal conditions, by performing an overview of published systematic reviews. While the proposed study is of relevance, there are some issues that I would like the authors to clarify/discuss.

Major compulsory revisions

There needs to be further explanation on how and why (in particular for conditions which are nonspecific by nature, such as back and neck pain) evidence for the effect of exercise therapy on disease pathogenesis was explored. This could be done either in the Introduction or Methods section.

In the methods section, the authors need to better justify why non-Cochrane reviews were included only if published after 2007. On that same note, why were Cochrane reviews included only if they were updated after Jan 2007?

Were the reviews on the effect of exercise on pathogenesis in MSC also systematic reviews? And why was a new search needed?

The authors point out that exercise dosage is associated with bigger effects, but the results of Ferreira et al and Fransen et al suggest that the effects/meta-regression coefficients are too small to be relevant. Please comment on that.

Please provide more information on how the methodological quality of reviews was performed and discuss the main differences between Cochrane and non-Cochrane reviews.

Minor revisions

In the abstract, please provide quantitative data on effects of exercise in patients with osteoporosis and avoid the qualitative jargons (i.e. strong evidence).

In the background section, page 3, paragraph 3, I wonder if it is necessary to mention physical activity, as the overview clearly focuses on exercise.

On page 4, search methods, Pedro should be written as PEDro.

Under ‘data collection and analysis’ please clarify if you have extracted data (SMD) from individual trials included in the reviews or pooled analyses. It becomes clearer in the results but it should be clear in the methods as well.
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 am currently collaborating with one of the authors, but otherwise, I have no competing interests in regards to this paper.