Reviewer's report

Title: Time-course of Exercise and its Association with 12-Month Bone Changes

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Reviewer: Jose A L Calbet

Reviewer's report:

In general, I'm happy with the corrections performed by the authors. Most of my previous concerns have been solved. The most critical aspect that remains is that the authors can not completely account for carry over effects just by statistically adjusting the multiple linear regression models, because as recognized by the authors in the manuscript the osteogenic response to loading is not linear, i.e. the effect observed during the initial months are of greater magnitude than the effects observed between the 6 and 12th month (as reported in other studies where intermediate aBMD measurements were performed). Despite the explanations given by the authors, my concern about vitamin D status remains. This is due to the slow response of bone tissue to changes in calcium and vit D and also because there may interaction between exercise and vit D status. A control group would have help to account for these potentially confounding effects. The authors acknowledge that they have a control group: why not to report the changes in aBMD and geometrical variables observed the control group?

Following concerns need specific response:

1) By looking at Figure 1 it is clear that 15-16 women (44-47% of the sample studied) did not increase their Trochanter BMD with the training program: why? This deserves some comments in the discussion. Was this pattern similar for the other correlations reported in Table 2? The non-responding women were always the same or this was a "random effect", i.e., a women may respond in one region but not in another?

2) (In Fig. 1) Does it make sense to use women that did not increase or even had a reduction in their throcanteric aBMD to defend that daily number of impacts 0-6 months 5.4-9.2g has a positive influence on the enhancement of aBMD?

I have one suggestion and this is to report the correlation coefficients as a small "r", leaving the capital "R" to report the multiple regression coefficients.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I declare that I have no competing interests