Reviewer's report

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

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Reviewer: Jun Iwamoto

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Kåre Birger Hagen et al. conducted an overview of systematic reviews on the effectiveness of exercise therapy for musculoskeletal conditions. In addition, the evidence for the effect of exercise therapy on disease pathogenesis, and whether particular components of exercise programs would be associated with the size of the treatment effects were explored. As a result, it was found that there was consistent empirical evidence that exercise therapy had small to moderate beneficial clinical effects for most musculoskeletal conditions. This paper is well written. However, the impact of this paper may be a bit weak for physicians, because exercise therapy appears to be vague from the clinical practice point of view.

Comments
1. The clear reason why an overview of systematic reviews was needed regarding the effectiveness of exercise therapy for musculoskeletal conditions, despite the existence of systematic review studies, can be much more clearly mentioned.
2. The inclusion and exclusion criteria of Cochrane database of systematic reviews can be much more detailed.
3. The definition of osteoporosis is not right. Newer NIH consensus can be referred.
4. There are many studies that showed the effectiveness of exercise therapy on the incidence of falls in older patients with osteoporosis. The relevant studies can be included because the goal of exercise therapy for osteoporosis is to prevent fractures by increasing bone mineral density and falls.
5. Age and gender may be important factors affecting the effectiveness of exercise on musculoskeletal conditions. Regarding information can be added elsewhere.
6. Please discuss extensively the following issue; which types of exercise are useful to improve musculoskeletal conditions; How much exercises are enough to improve musculoskeletal conditions; How long the exercises must be continued.
7. Not only the type of exercise therapy, but also physical function, can be much more specified.
8. Effectiveness must be clearly distinguished from effect.
9. There are several typos that must be corrected.

**Quality of written English:** Acceptable

**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.