Reviewer’s report

Title: Preoperative muscle weakness as defined by handgrip strength and postoperative outcomes: a systematic review.

Version: 1  Date: 7 November 2011

Reviewer: Richard Bohannon

Reviewer’s report:

I believe all of my comments should be considered essential or compulsory:

Although not widely used in clinical practice to predict postoperative outcomes, handgrip strength is supported for such use by an abundance of research. The authors have done a good job of summarizing the research. I am unaware of any articles they missed in spite of their failure to search CINAHL or Web of Science and their providing no evidence of consultation with an expert regarding the comprehensiveness of their findings.

1) I found the Background to be a bit “meandering.” I believe it could be more direct and sequential. Perhaps minimizing information on exercise capacity and cardiopulmonary status would help.

2) A good Background or Introduction establishes need in two ways. One is to indicate the magnitude of the problem. The authors provide little information about the incidence of untoward postoperative outcomes. The other is to indicate what has already known. For if the answer to an issue is already clear, there is little point in addressing it again. In the case of a review, this may boil down to the adequacy of other reviews (if any). The authors address adequacy by citing reference 8 (though they should indicate why it is inadequate). They do not site Bohannon (J Geriatr Phys Ther 2008), whose review includes many of the same articles that the authors cite.

3) The authors indicate in the Background that grip strength has “established population norms.” There are several papers that purport to present norms. One or more should be cited.

4) The authors use the term “methodology” or “methodological” several times (eg, page 6). Technically, the term means the study of methods. I suggest “procedural” or some similar alternative.

5) For consistency I suggest the authors indicate “….morbidity (n=10/15 studies)…” on page 3.

6) On page 7 (third line of results) the authors write “subspecialties were explored.” It should be “subspecialties was explored.” The subject is “range.” Range is singular.

7) On the bottom of page 10 the authors use the phrase “weaker strength.” I think “impaired strength” may be preferable.
Level of interest: An article of importance in its field

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 have no major competing interests. I consult with a company that manufactures a hand-grip dynamometer. However, neither they nor I are likely to benefit from the publication of this article.