Author's response to reviews

Title: Systematic review and meta-analysis comparing land and aquatic exercise for people with hip or knee arthritis on function, mobility and other health outcomes

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Author's response to reviews:

Dear Chris

thanks for reviewing the resubmit

'1. The authors found no difference between the two treatments but then recommend either option as an effective treatment for arthritis. This is not justified by the trials they included: eg it could be that both treatments are equally harmful in which case it would make no sense to recommend either treatment. If the authors revised the introduction to include evidence from RCTs and reviews to demonstrate that land-based exercise is effective (compared to no treatment) then there conclusion would make sense. Likewise if there was evidence that water-based exercise (versus nothing) is effective then their conclusion would have some logic. As it now stands it is suspect.

The opening paragraph argues

Regular moderate physical activity provides a wide range of health benefits and graded exercise programs are effective interventions for knee osteoarthritis [6].

The abstract concludes

Outcomes following aquatic exercise for adults with arthritis appear comparable to land based exercise. When people are unable to exercise on land, or find land based exercise difficult, aquatic programs provide an enabling alternative strategy.

The final paragraph has been amended to read

Both aquatic and land based exercise programs appear to result in comparable outcomes for function, mobility or pooled indices.

Hope this softer close removes the need to defend earlier conclusions by others
regarding effects of exercise on somewhat different populations

We wanted the review to focus on the relative benefits under the two approaches, given the high cost and safety training required for aquatic therapy

2. The effects for individual studies are missing from the forest plots eg Foley 2003 in figure 2. Please revise.

The text explains that

1) meta analysis was conducted

2) where data indicated significant differences between groups at baseline they were removed and meta analysis repeated

The figures show this second analysis (seemed like a closer approximation to truth)

I will upload the manuscript again with the changed conclusion and take your advice from here

bw

Jenny