

Booth et al. reply

*DMCN authors reply to the letter from **Moreau***

Editor,

We thank Dr. Moreau for her knowledgeable comments on our **systematic review**. We agree fully that a randomised controlled trial (RCT) should always be considered the gold standard in assessing the effectiveness of an intervention for a given outcome. As such we present the main findings of the systematic review as the outcome of the meta-analysis on RCTs and other controlled trials, comparing the effect of gait training and standard therapy on walking speed.

However, in a rehabilitation setting, RCTs and controlled studies are not always possible, and hence studies often attempt to infer training effects based on study designs investigating the pre-post effect of an intervention on a single group. These studies are indeed of lower level of evidence, with inherent risk of bias as is correctly stated. However, we believe that these studies do have merit, and considered their combined results to be of interest to the reader. Gait training encompasses a wide range of interventions and by presenting this additional information, we intended to provide an insight into potential trends by grouping treatment type, reporting an estimate of the pre-post intervention effect size. We did not attempt to draw statistical significance from this visualization and state in the results that interpretation of this should be treated with caution, primarily for the reasons specified. We go on to comment in the discussion that the lack of a consistent control group limits the ability to draw strong conclusions in comparison of intervention types.

In the important study by Aviram et al.,¹ reporting a large multi-centered matched pairs study comparing treadmill training with functional circuit training, including 95 adolescents with cerebral palsy, both groups do indeed improve in response to intervention. Table IV states that the outcomes are statistically significant in favour of the functional circuit training group. Indeed Figure 2 does not show the comparison between groups, but this information is given in Figure 3. We comment in the discussion that both groups in this study improve and discuss the findings of this study in more detail; noting that both interventions have a focus on functional goals. We would encourage readers to investigate this paper reporting long lasting positive effects as a result of both of these interventions.

Ultimately we understand the concerns of Dr. Moreau, and would reiterate our call to treat the additional within-group analysis with caution. Lastly we would strongly encourage further high-quality RCT study designs, with consistent controls and outcome measures, to establish the true effects of functional gait training interventions to improve gait in cerebral palsy.

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Reference

1. Aviram R, Harries N, Namourah I, Amro A, Bar-Haim S. Effects of a group circuit progressive resistance training program compared with a treadmill training program for adolescents with cerebral palsy. *Dev Neurorehabil* 2017; **20**: 347–54.