

# LETTER TO THE EDITOR-IN-CHIEF

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## CAN “STRONG” RECOMMENDATIONS BE MADE FOR EXERCISE AND MANUAL THERAPY IN TREATING SUBACROMIAL SHOULDER PAIN?

In their recent review of systematic reviews on subacromial shoulder pain (SSP), Pieters et al<sup>5</sup> make several strong conclusions. We would like to comment on 2 of these. First, the authors claim that “evidence for exercise as an intervention for SSP is increasing and strengthening.” Second, we discuss their decision to make a “strong recommendation” for the use of manual therapy in the initial treatment phase.

First, based on this review, it is not clear that the evidence for the use of exercise for SSP is increasing or strengthening. It might be accurate to say that the volume of research evidence is increasing, but this is not the same as suggesting that the evidence in favor of exercise for SSP is increasing and strengthening. To substantiate this recommendation would require clear evidence of increasingly consistent, clinically important effect sizes over time, which does not appear to be the case, or at least cannot be derived from the data provided in this review of systematic reviews. As the authors reflect, there is considerable uncertainty around the optimal type, dose, and duration of exercise for SSP, or, indeed, whether these characteristics of exercise programs matter greatly in terms of patient outcomes. Most of the included systematic reviews do not comment on effect size or the clinical importance of the between-group differences observed. In those that do, we

would like to draw readers’ attention to the wide confidence intervals (indicating uncertainty). We therefore believe it would be more accurate to conclude that, based on the rating system used in this review of systematic reviews, there is evidence for using exercise for SSP, but the clinical importance of the size of the differences observed is uncertain.

Second, their “strong recommendation” for the use of manual therapy in the short term needs further consideration to ensure accurate interpretation. Pieters et al<sup>5</sup> write that they have based this recommendation on the number of studies that report high-, moderate-, and low-quality evidence for each treatment. However, they seem to overstate the strength of the evidence described in these reviews. Of the 4 reviews underpinning their strong recommendation for manual therapy, it is true that both Page et al<sup>4</sup> and Haik et al<sup>3</sup> describe the level of evidence they found as “high.” But Page et al<sup>4</sup> report high evidence for no clinically important differences between exercise and manual therapy versus placebo. Further, Desjardins-Charbonneau et al<sup>2</sup> describe the evidence as “low to moderate,” and Steuri et al<sup>6</sup> as “very low quality,” not moderate, as Pieters et al<sup>5</sup> report for both. If these studies were reclassified as low quality, then Pieters and team’s strong recommendation could not be made.

In addition to our concerns about the basis for this strong recommendation, we would like to add that the recommendation reflects the authors’ conclusions about the quality of the evidence, but it does not represent the size or clinical importance of the effect of exercise or exercise combined with manual therapy. Statistical significance is not the same as clinical importance. In fact, the conclusions of these systematic reviews are far more tentative than the phrase “strong recommendation” might imply. Indeed, Desjardins-Charbonneau et al<sup>2</sup> write that the effect “may or may not be clinically important,” and the study by Page et al,<sup>4</sup> a Cochrane systematic review, reports “no

clinically important difference between groups in any outcome.”

Hence, we believe it would be more accurate to conclude, based on the rating system used by Pieters et al,<sup>5</sup> that there is evidence for using exercise combined with manual therapy for SSP, but the clinical importance of any benefits observed is uncertain. Such a conclusion would be in keeping with the only sham-controlled trial on this topic, by Bennell et al,<sup>1</sup> which found that a standardized program of manual therapy and home exercise did not confer additional immediate benefits for pain and function compared with a realistic placebo treatment, but at 22 weeks there was a statistically significant difference between the treatment groups that did not meet the threshold for clinical importance.

We hope this letter helps readers to accurately interpret the findings of this recent review of systematic reviews of treatments for SSP.

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*Dr Littlewood has recently collaborated and published with the lead author (Louise Pieters) and senior author (Filip Struyf) of the work under commentary. No financial support was received for writing this letter. The authors certify that they have no affiliations with or financial involvement in any organization or entity with a direct financial interest in the subject matter or materials discussed in the letter.*

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## RESPONSE

We would like to thank Dr Littlewood and his colleagues for their interest in our paper,<sup>5</sup> and for taking the time to express their concerns.

We address 3 key points. First, Dr Littlewood and his colleagues note concern with the statement of increasing and strengthening evidence for the use of exercise as an intervention for SSP. We acknowledge that the volume of research evidence is increasing, and that this is not the same as suggesting that the evidence in favor of exercise for SSP is increasing or strengthening.

In order to support our statements, we need clear evidence of increasingly consistent, clinically important effect sizes over time. As not all included systematic reviews reported effect sizes, only the available ones were reported in our paper.<sup>5</sup> In Littlewood et al's<sup>3</sup> 2013 review, exercise therapy was mentioned as a possibly effective intervention for SSP. Since 2013, there have been more studies in

favor of exercise therapy, which makes a stronger conclusion possible. We agree that there might be a risk of misinterpretation. We believe that the strengths of our systematic review far outweigh the weaknesses in accomplishing this goal.

Second, we agree that continued research is needed to better understand the uncertainty around the ideal type, dose, and duration of exercise for SSP, and to what extent these characteristics matter in terms of patient outcomes. The main goal of our review<sup>5</sup> was to provide an overview of conservative physical therapy interventions and their effectiveness. The key conclusion is that there is evidence supporting exercise for SSP. However, what constitutes the most appropriate exercise regime is unclear.

Third, Dr Littlewood and his colleagues have concerns about the "strong recommendation" for the use of manual therapy in the short term. Of the 4 reviews underpinning our strong recommendation, Haik et al<sup>2</sup> and Page et al<sup>4</sup> describe the level of evidence as "high." For Desjardins-Charbonneau et al,<sup>1</sup> the evidence is described as "low to moderate," but the addition of manual therapy to an exercise program was significantly effective for pain reduction. Steuri et al's<sup>6</sup> description is ambiguous, but they describe different moderate effects of manual therapy on both pain and function. The word "strong" can also be used in different ways. When describing the quality of the evidence to be included in a review, a system needs to be put in place to describe differences and similarities that will be included. Not following such a process would be counterintuitive to the purpose of systematically reviewing research. One way to reduce bias is to clearly define criteria before analysis, a process we followed. The term "strong" was defined at the protocol development stage, before the search was conducted and before the data were analyzed.

We emphasize that all possible effects of manual therapy for SSP are seen in the short term following treatment, in the initial phase of rehabilitation, and al-

ways when manual therapy is used in addition to an exercise program. No effects of manual therapy as a solitary treatment were described.

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