

## Thread by Gerard Koel, 31-05-2021

### A response to a thread by Mikkel Bek Clausen from 28-05-2021

[https://twitter.com/gerard\\_koel/status/1399300155996786690](https://twitter.com/gerard_koel/status/1399300155996786690)

Starting 1 >> 11 tweets.

1: Last week [@MikkelBek](#) published a thread of 12 tweets about the results of the SExSI trial (or in fact the non-results) . First of all: compliments for the job. Proper methodology applied. Congratulations with work and publication in AmJSM.

**THE SExSI-TRIAL**  
A PRAGMATIC, DOUBLE-BLINDED  
RANDOMISED CONTROLLED TRIAL  
Authors: Clausen MB, Hölmich P, Rathleff MS,  
Bandholm T, Christensen KB, Zebis MK, Thorborg K  
[@MikkelBek](#)

**Sponsors:** SORC-C, The Danish Rheumatism Association, Fysioterapipraksisfonden

**Co-authors** **Key project staff**

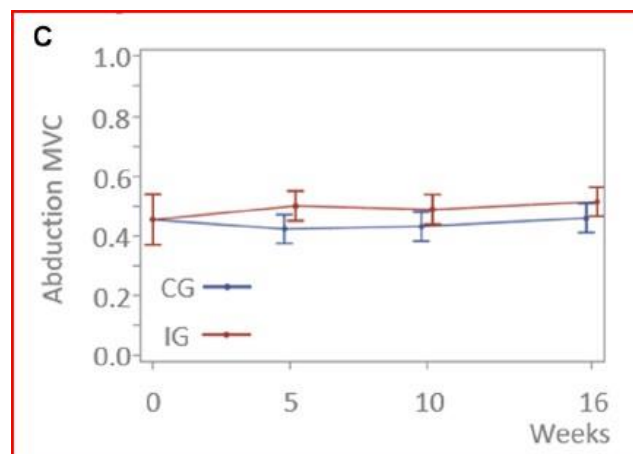
**Effectiveness of Adding a Large Dose of Shoulder Strengthening to Current Nonoperative Care for Subacromial Impingement**

**A Pragmatic, Double-Blind Randomized Controlled Trial (SExSI Trial)**

Mikkel Bek Clausen,<sup>\*,††</sup> PhD, Per Hölmich,<sup>†</sup> DMSc, Prof., Michael Rathleff,<sup>§||</sup> PhD, Prof., Thomas Bandholm,<sup>¶</sup> PhD, Prof., Karl Bang Christensen,<sup>\*\*</sup> PhD, Mette Kreutzfeldt Zebis,<sup>‡</sup> PhD, and Kristian Thorborg,<sup>†\*</sup> PhD, Prof.  
*Investigation performed at the Sports Orthopedic Research Center-Copenhagen, Department of Orthopedic Surgery, Amager-Hvidovre Hospital, Institute of Clinical Medicine, University of Copenhagen, Copenhagen, Denmark*

2: Many colleagues responded positive upon the tread. Well done Mikkel by: [@FysioScience SE](#); [@DerekGriffin86](#); [@Retlouping](#); [@AnjuJaggi](#); [@C\\_A\\_Patterson](#); [@LoriMichener](#); [@rodrizzo\\_pain](#); [@JeremyLewisPT](#); [@McCreesh\\_Karen](#); [@KevinKinecoach](#); [@AdamMeakins](#); [@KThorborg](#) etc. Is it well done?

3: Shouldn't a 'large strengthening program' not at least increase the power tested with an isometric HHD? The program developed by our Danish colleagues seems to be ineffective. Is the proper methodology combined with an improper intervention?



4: The review of Naunton et al concludes (carefully, with uncertainty) that progressive exercise seems to have better results than non-progressive exercises in RCR-SP patients. Thereby exercises should be challenging for SP patients.

Original Article

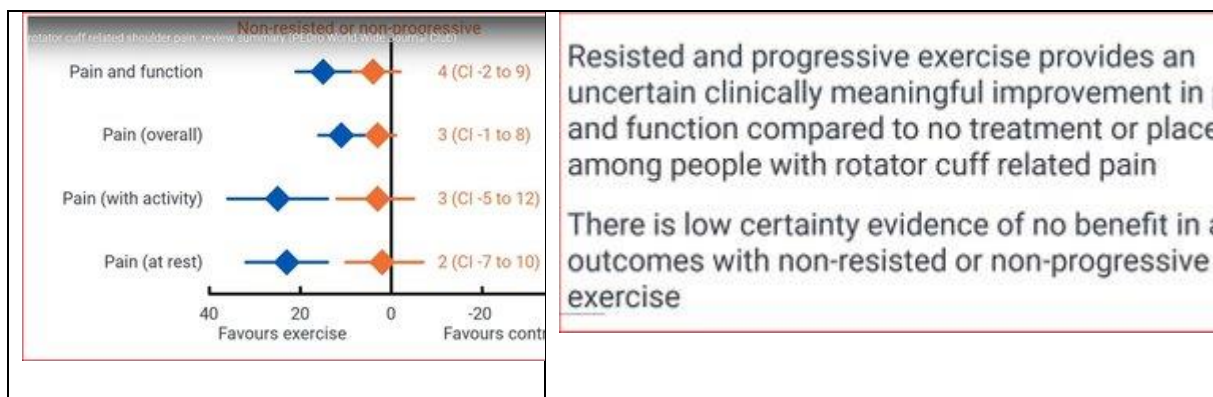
**Effectiveness of progressive and resisted and non-progressive or non-resisted exercise in rotator cuff related shoulder pain: a systematic review and meta-analysis of randomized controlled trials**

Josh Naunton<sup>1</sup>, Gabrielle Street<sup>1</sup>, Chris Littlewood<sup>2</sup>, Terrence Haines<sup>3</sup> and Peter Malliaras<sup>4</sup>

CLINICAL REHABILITATION

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5: I like to use elastic bands for home exercises, but more for functional training in 90° abd-ext.rot, for speed. But not to increase muscle strength, therefore dumbbells should be used. Underneath another study not able to find clear increased strength with therabands.

Knee Surg Sports Traumatol Arthrosc (2017) 25:2051–2059  
DOI 10.1007/s00167-016-4223-x

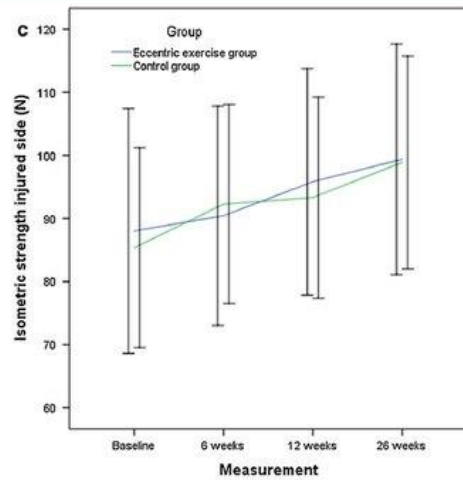
SHOULDER

**Eccentric versus conventional exercise therapy in patients with rotator cuff tendinopathy: a randomized, single blinded, clinical trial**

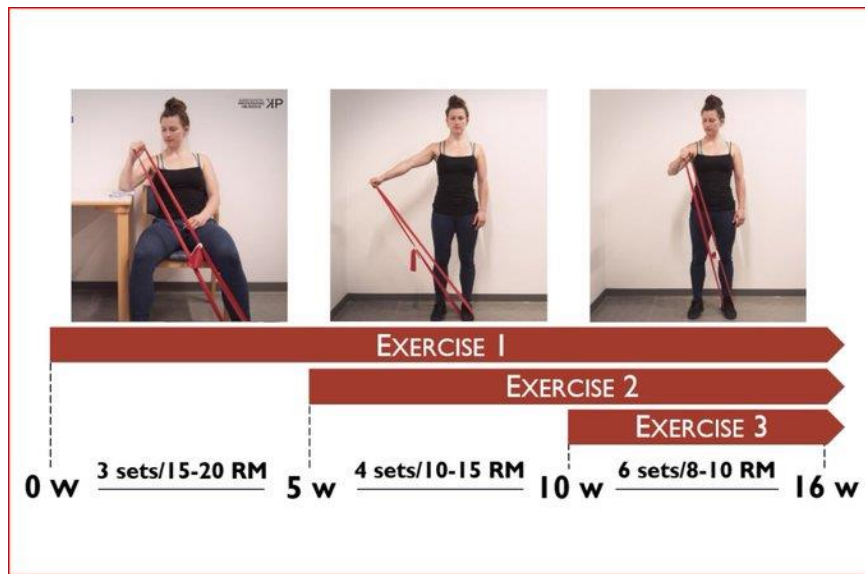
Beate Dejaco<sup>1</sup>, Bas Habets<sup>1</sup>, Corné van Loon<sup>3</sup>, Susan van Grinsven<sup>3</sup>, Robert van Cingel<sup>1,2</sup>

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The EE group performed two exercises. First, a supine lying eccentric exercise for the external rotators, with an elastic band (Duraband, Servofit) wrapped around the homolateral foot at one side and held by the patient's hand. The shoulder was in 90° of abduction and external rotation. The participant was then asked to bend the knee, externally rotate the shoulder, and subsequently to extend the knee and to internally rotate the forearm at a speed of 6–8 s (s) per repetition. Secondly, participants performed an empty-can abduction exercise in the scapular plane. Participants elevated their arm passively with a pulley until 90° of abduction. Then, they were asked to lower their arm actively at a speed of 6–8 s per repetition. Pain during the



6: The three exercises were totally non-functional. Have limited ROM (max 45 degrees scaption) and thereby the exercises were not progressively loaded. See last sentence in tread of [@MikkelBek](#). Was it RM or just repetition? My guess: repetition!



**Mikkel Bek Clausen** @MikkelBek · 28 mei

10/

Time spent on usual care exercise differed between groups. Adjusting did not change results, showing that these would not be different if patients had spent an equal amount of time on usual care exercise.

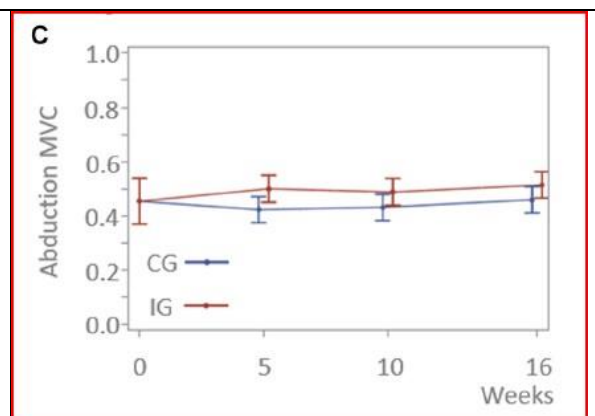
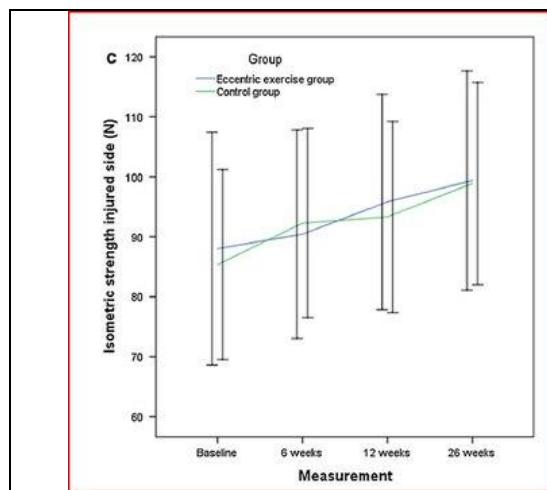
Also indicates that pts were not able/willing to increase exerc. dose

7. Danish SP patients are also not enthusiastic by the program; calculated was a loading time between 2 - 12 hours in 3 months. Real time = 2.9 hours; in 16 weeks (112 days) 90 seconds per day. Thereby the intervention group reduced the normal time per day (normal: 7 minutes pd).

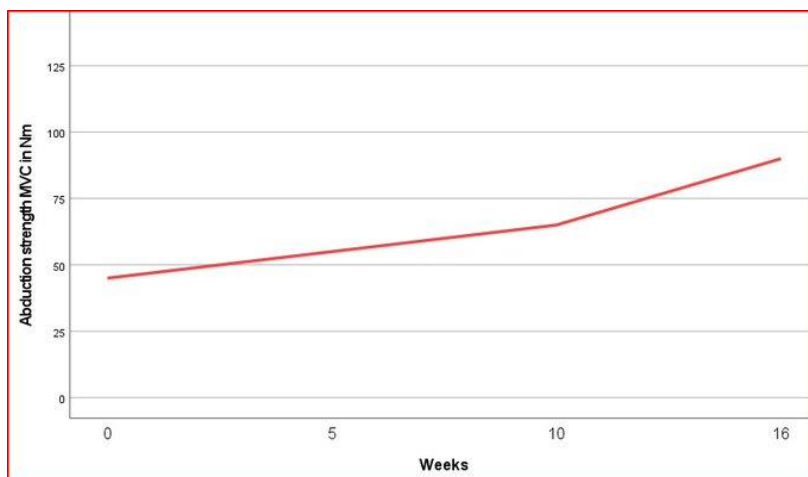
which is a key aspect of pragmatic randomized controlled trials.<sup>28</sup> It can be argued that a limitation of the current study is that the average total dose (time under tension) of 2.9 hours (10,468 seconds) was somewhat lower than the prescribed dose of 12 hours. Despite this, such an addition to the exercise dose seems to be sufficient to expect a clinical response, as a similar dose per week during 6 weeks has previously led to significant clinical improvements.<sup>35</sup> This also makes good sense, as 2.9 hours' time under tension corresponds to more than 3 sets of 10 repetitions every day during the full 16-week intervention period if using a standard exercise tempo of 1-second concentric, 1-second isometric, and 1-second eccentric contractions. Interestingly, the proportion of the prescribed time



8: Is improved power tested with HHD based upon muscle strength only? No it isn't, most RCR-SP perform better because the loading capacity of the RC tendons is increased and because patient are more confident. Of course in the Clausen RCT the strength is expressed as Nm/kg and in the DeJaco trial in Nm.




9: In daily PT practice we like to use (just as Beate DeJaco) the CMS expressing the 90 degrees scaption (not reached in the SESSI trial!). Scores can be used evaluative and my SP patients and I are depressed if the score in Nm doesn't improve clearly.



10: So my conclusion is: The exercise program developed by Danish PT's is non-functional, non-progressive, non-challenging with a too small ROM, should not be used with the objective to improve RCR-SP patients. PT's should develop better rehab programs.

11: IMO the rehab training in SExSI trial could be used in the beginning of the rehab period, it is mainly isometric with small ROM. It's not a large program and not improving daily functioning. IMO the conclusions of [@MikkelBek](#) underneath are premature and determined by an in-proper exercise program.



**Mikkel Bek Clausen** @MikkelBek · 28 mei

9/  
 RESULTS: Despite the prescription of a large additional exercise dose, we found NO difference between groups. Not in patient-reported disability (SPADI), nor in strength, ROM or QoL. Confidence limits for SPADI did not surpass the margin of clinical relevance (10 pts).