

# LETTER TO EDITOR FOR THE MANUSCRIPT: THE DOSE-RESPONSE PHENOMENON ASSOCIATED WITH STRENGTH TRAINING IS INDEPENDENT OF THE VOLUME OF SETS AND REPETITIONS PER SESSION



LETTER TO THE EDITOR  
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## Dear Editor:

We carefully read the recent article by Evangelista et al.<sup>1</sup>. Although the topic is interesting and relevant, we found inconsistencies and impressive reported data. Thus, we would like to ask the authors some points:

**a.** It would be possible to provide more details about the recruitment of volunteers? This fact becomes important, since they have not only the same age, body mass and height (table 1), but also practically the same values of one repetition maximum (1RM) loads for the biceps curl and back-squat exercises (table 2), in addition to the same muscle thickness values for the biceps brachii, brachii, triceps brachii and vastus lateralis muscles (table 3).

**b.** The observed information from above topic 1, drew attention to the reported values of the study. Considering that none of the volunteers in their study had any experience with resistance training for at least six months, prior to the experimental period, how is it possible to present such incredible results for back-squat exercise: for instance, the mean values for 1RM load (back-squat) reported by the authors in table 2 ( $207 \pm 64$  kg post 8 weeks of training) are higher than the mean values achieved by the top 12 athletes in the 2020 Brazilian weightlifting championship ( $194.9 \pm 30.8$  kg; accessed <https://powerliftingbrazil.wixsite.com/cblb/2020>). In other words, these 30 volunteers (mean body mass of 72 kg) included in the study of Evangelista and cols<sup>1</sup> study could win the Brazilian National championship, even competing in a heavier body mass category of 74 Kg and only after 8 weeks of training instead of years! Are the authors able to reveal what is this magic pill for strength increase?

**c.** In addition, even after a resistance exercise training specific protocol values of 1RM back-squat under 200 kg for subjects with higher body mass (over 82kg) and years of resistance training are described<sup>2</sup>. Also, on back-squat exercise, the authors<sup>1</sup> found values far above average (calculated by table 2) for mean relative strength (1RM/body mass) of  $\sim 2.1$  and 2.9 at pre and post training protocol, respectively. Their values are close, or even higher, than those reported for professional strength and power athletes of 2.2 for strength-trained subjects of 2.4 for weightlifters<sup>3</sup>.

**d.** Figure 2 presents a parameter denoted as weekly accumulated total load lifted (ATLL). Since there are no references about how it was calculated, we presume it is the absolute volume load (sets x repetitions x load)<sup>4</sup>. This should be amended.

**e.** It was stated that all 3 protocols were performed until concentric failure (being performed maximum repetitions), and with the same rest interval (90 s) between sets. However, there is a body of evidence demonstrating a significant reduction in the number of repetitions when exercises are performed to failure with a specific load and short rest intervals<sup>5,6</sup>. Could this fact be explained by the authors?

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All authors declare no potential conflict of interest related to this article

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