

Effects of Regular and Slow Speed Resistance Training on Muscle Strength

Westcott WL, Winett RA, Anderson ES, Wojcik JR, Loud RL, Cleggett E, Glover S.
South Shore YMCA, Quincy, Massachusetts, USA.

BACKGROUND

The study assessed a way to increase the intensity and effectiveness of resistance training by comparing training with a slower repetition speed to training with a conventional repetition speed. slower repetition speed may effectively increase intensity throughout the lifting phase while decreasing momentum.

METHODS

Two studies were done with untrained men (N=65) and women (N=82), (mean age=53.6) who trained two to three times per week for eight to 10 weeks on a 13 exercise Nautilus circuit performing one set of each exercise. Participants exclusively trained using regular speed repetitions for 8 to 12 repetitions per set at 7 sec each (2 sec lifting, 1 sec pause, 4 sec lowering) or a slow(R) training protocol where they completed 4 to 6 repetitions per set at 14 sec each (10 sec lifting, 4 sec lowering). All of the participants were tested for either the 10 repetition-maximum (RM) weight load (regular-speed group) or the 5-RM weight load (slow-speed group).

RESULTS

In both studies, slow training resulted in about a 50% greater increase ($p<0.001$) in strength for both men and women than regular speed training. In Study 1, the slow training group showed a mean increase of 12.0 kg and the regular speed group showed an increase of 8.0 kg increase ($p<0.001$). In Study 2, the slow training group showed a 10.9 kg increase and the regular speed group showed an increase of 7.1 kg ($p<0.001$).

CONCLUSIONS

Slow training is an effective method for middle-aged and older adults to increase strength. Although studies still need to be done with at-risk populations, repetition speed should be considered when prescribing resistance training.