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*Abstract*

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**LOW-INTENSITY RESISTANCE EXERCISE TRAINING INCREASES LOWER LIMB FORCE IN HEALTHY RETIREES**

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ABSTRACT

**INTRODUCTION:** Aging is associated with decreasing muscle strength. Older people who have never done resistance work in a gym require gradual training programs to help them increasing confidence on this type of training. The use of low intensity resistance exercise with slow movements and tonic force improvement has been proposed as an effective method to increase muscular strength. There is little literature on the effect of intensity training on 30% of one repetition maximum (RM). **PURPOSE:** To establish the changes in the strength of upper and lower limb force after participating in a 10 week low-intensity resistance exercise for a group of healthy retirees aged between 50 and 70 years. **METHODS:** Quasi-experimental design, with two measurements. Fifty-eight participants were separated into two groups according to their available schedule. The experimental group received low-intensity resistance training for ten weeks, three times a week, with an intensity of 30 to 60% RM. The control group received no training. Physical tests applied to both groups were: handgrip strength with digital dynamometer, Short Physical Performance Battery (SPPB) and 8-Foot up and go test (FUGT). **RESULTS:** Forty nine participants completed the study (total dropout rate was 16%) from which 57% were women. Participants in the experimental group ( $n = 31$ ) had improvements in SPPB and FUGT tests ( $p < .05$ ). Without changes in handgrip strength. On the other hand, any changes were observed in the control group. **CONCLUSION:** The results indicate that a low-intensity resistance training (30% 1RM) is a useful method to increase muscle strength of lower limbs in healthy older adults. Due to the interference effect of training, more time is required to observe changes in the dynamic strength of the upper limbs. This type of training program is useful for promoting functionality in older adults reluctant to resistance training.