Increase in muscle power induced by periodized resistance training in elderly women #79

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Resistance training (RT) has been recommended to prevent muscle force and power decrease induced by aging. Neuromuscular tests are important tools to analyze muscle force function. The objective of the present study was to analyze the behavior of lower limb muscle power of elderly women submitted to 12 weeks of periodized RT. 16 women aged 65.5±3.6 years with a minimum of one year of previous experience in strength training were selected, they performed 24 sessions of RT divided in 3 mesocycles (MA, MB and MC), of 8 sessions each, with a session frequency of twice a week. The MA with light intensity, MB moderate and MC with high intensity. Lower limb muscle power was measured by vertical jump test. For statistical analysis a $p<0.05$ was assumed. There was a significant increase in vertical jump after four (T2), eight (T3) and 12 weeks (T4) as compared with baseline (T1) (table 1).

Table 1. Results of the vertical jump test at baseline (T1), after four (T2), eight (T3) and 12 weeks (T4).

Lower limb muscle power test	T1	T2	T3	T4
Vertical jump (cm)	15.87 ± 1.44	16.75 ± 1.99*	17.18 ± 1.49*	18.43 ± 1.50*

(*) intra-group significant difference compared with T1, $p<0.05$.

Periodized RT induced positive effects on lower limb muscle power in elderly women. These results are very important for aging, since higher loses in muscle force are observed in lower limb. Periodization is an

important tool to prolong the results of muscle power increase induced by RT.

Key words: aging; periodization; resistance training.