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P4. The effect of a multicomponent training program in elderly's body composition

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INTRODUCTION

Physical exercise is recommended to maintain the muscular mass in elderlies (Singh, 2002). Among the different types of exercise programs, there is the multicomponent training (Carvalho et al., 2010). The multicomponent training program allows the subjects to improve their physical condition (Strength, resistance, flexibility and balance) (Carvalho et al., 2009). However, there is no consensus about the influence of multicomponent training in body composition. Thus, the aim of this study was to access the multicomponent training effect in elderly's body composition.

METHODS

The sample of this study was composed of forty nine 64.39 (± 6.33) year-old elderlies. Among them, 11 were 67.45 (± 4.93) year-old males and 38 were 63.50 (± 7.47) year-old females. All procedures carried out in this research were in accordance to the Declaration of Helsinki. A multicomponent training program was applied with the Carvalho et al, (2009). The program took 8 months and the training frequency was three times per week.

The elderly's body composition were assessed with bio-impedance (Tanita, BC-545). The T-test allowed to assess the differences between the pre and post training program in the body composition. The tests were performed with a significant level of 5%.

RESULTS

Table 1 presents the mean and standard deviation (± SD) between the two evaluation moments. The statistical significance is also presented in table 1.

Table 1
Mean and standard deviation (± SD) of the body composition variables between the pre and post-test

Variables	Pre-Test	Post-Test	p
	Mean (± SD)	Mean (± SD)	
Body mass	68.92 (± 8.58)	68.51 (± 8.69)	*
Fat mass	32.06 (± 7.723)	31.55 (± 7.840)	0.011
Muscular mass	44.92 (± 7.23)	45.14 (± 9.28)	0.873
Body water (%)	49.49 (± 6.27)	49.67 (± 6.37)	0.004
Metabolic rate	1390.02 (± 202.67)	1415.02 (± 202.84)	0.006
Bone mineral mass	2.24 (± 0.48)	2.24 (± 0,48)	*
Visceral fat	9.61 (± 2.72)	9.35 (± 2.61)	0.000**

*p<0.05; **p<o.oo1

CONCLUSIONS

A multicomponent training program in elderlies seems to influence the body composition. The total body mass decreased between the two moments. The bone mineral mass and body water percentage had a significant increase between the two moments. Even more, all the variables improved between the two moments.

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