

Aerobic Training Improves Angiogenic Potential Independently of VEGF Modifications in Postmenopausal Woman

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Purpose: To evaluate the effect of walking-training on serum angiogenic potential in postmenopausal women.

Materials and Methods: Thirty-four postmenopausal women (56.18 ± 4.24 yr) participated in a 13 weeks program of walking-training. Anthropometric measures, VEGF, IL-1 α , IL-1 β , IL-2, IL-8, IL-10, IL-12p70, TNF- α , C-reactive protein, insulin, IGF-1, cortisol, DHEA-S, leptin, visfatin, resistin and adiponectin were evaluated before and after training. Moreover, serum samples were tested for their ability to chemo – attract endothelial cells and to support the in vitro formation of capillary – like structures.

Results: After training, the levels of IL-8, TNF- α , leptin and resistin were significantly lower, levels of DHEA-S and adiponectin increased, serum angiogenic properties improved, whereas no changes in anthropometric parameters or VEGF were detected.

Conclusions: Walking training reduces inflammatory status and leads to a significant improvement in serum angiogenic properties in the absence of modifications in body composition and VEGF level.