Analysis of body composition and blood parameters on 20 subjects after 6 months of training with SuperJump

<u>Patrizia Proia</u>, Antonio Lo Verso, Jill Cooper, Valentina Contrò, Antonino Bianco, Marcello Traina and Antonio Palma

Dipartimento di Scienze Giuridiche, delle Società e dello Sport, Università degli Studi di Palermo

The "Jill Cooper's aerobic accellerator system" uses high quality rebound, modified to increase the acceleration, create a more accommodating work surface, greater stability and cushioning to protect joints. Thanks to the three forces of acceleration, deceleration, and the force of gravity, for each jump, the one-way valves of the lymphatic pathways open and close pushing the lymph towards the next "closed". This action allows the lymphatic system to make a full turn faster than usual.

We investigate the effects of 6 months of training on 20 subjects (age: 37 ± 19 ; weight: 74 ± 19 Kg; height: $164,5 \pm 13,5$ cm; BMI: $28,13 \pm 6,876$ Kg/m²; % body fat: $26 \pm 14,7$ Kg). Antropometric parameters were detected used a Bioimpedance analyzer (BF 302 Ormon BIA); blood samples were collected by a clinical specialized center to analyze lipid profile (total cholesterol, high density lipoprotein cholesterol, low density lipoprotein cholesterol and triglycerides) as well as white and red blood cells (WBC and RBC). All these tests were performed before and after training.

At the end of the six months of training all the determinations (body composition and blood tests) was made. The results obtained suggest that this system of fitness training got a great changement both on physical form (increase lean body mass at the expense of fat mass) that in blood parameters (all had a decrease statistical significance). The most relevant data covered the variation of blood parameters and in particular of the lipid profile: HDL, Triglycerides, LDL, total cholesterol.

Also as regards the blood cells, the results were detected mainly on the number of basophils, lymphocytes and eusinofili regarding the white cells. The results of this study are still preliminary, but the premises stimulate interesting to perform further investigations in this direction, with a higher number of subjects.

References

- [1] Tunstali et al. (2002) Exercise training increases lipid metabolism gene expression in human skeletal muscle. Am J Physiol Endocrinol Metab 283: E66-72.
- [2] Proia et al. (2012) The effects of a 3-week training on basal biomarkers in professional soccer players during the preseason preparation period. J Sports Med Phys Fitness 52(1): 102-6.
- [3] Paoli Antonio et al. (2009) Split exercise training in palestra: lavoro aerobico, anaerobico o misto? IISS vol II, Fasc. 3, Sez. 2.

Key words —

Aerobic accelerator system, superjump, blood parameters, BIA, lipid profile, WBC, RBC.