Plasmatic E-selectin levels were decreased in young women with metabolic syndrome after exercise training #18

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Cellular adhesion molecules (CAMs) such as E-selectin are involved in the rolling, adhesion and extravasation of monocytes into the atherosclerotic plaque. Fortunately regular exercise may improve pro-inflammatory status in individuals with metabolic syndrome. Accordingly, this study was designed to determine the influence of exercise on soluble plasmatic E-selectin levels in women with metabolic syndrome. Sixty adult women with metabolic syndrome according to the criteria reported by the National Cholesterol Education Program Adult Treatment Panel III volunteered for this study. Fourty-five were randomly included in experimental group to perform a 12-weeks aerobic training program, 3 days/week, consisting of warm up (10-min), main part (20-35-min [increasing 5 minutes each 3 weeks]) at a work intensity of 60-75% of peak heart rate (increasing 5% each 3 weeks) and cool-down(10-min). Control group included 15 age, sex and BMI-matched women with metabolic syndrome that will not perform any program. Written informed consent was obtained. Further the protocol was approved by an institutional ethic committee. Plasmatic E-Selectin levels was measured by ELISA, using a commercially available kit (Parameter, R&D Systems) twice: 72-hours before starting the program (pre-test) and after its ending (post-test).Results: When compared to baseline soluble E-Selectin concentration was significantly decreased after the 6-weeks protocol (76.4±7.2 vs 57.1±6.4 ng/ml; $p<0.05$). No changes were reported in controls. A 12-weeks aerobic training program decreased plasmatic E-Selectin concentration in women with metabolic syndrome.

Key- Words: Plasmatic E-selectin, women, metabolic syndrome, exercise