



Submaximal aerobic exercise effects on Blood Hemostasis in obese low-mobility women

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Abstract:

Objective: The current study aimed at exploring the effect of 8- week Sub maximal aerobic exercises on main blood hemostasis factors such as, t-PA, PAI-1, Plasminogen, Fibrinogen, D-dimer, PT and PTT in obese low-mobility women. **Methods:** In current semi- experimental study, 20 women (25-30 years) with low mobility and BMI > 30 kg/m² voluntarily participated and randomly assigned in two control (without exercise intervention) and aerobic (8 weeks: 10 minutes warm-up, 30-45 minutes sub-maximal aerobic with 60-85 of HR_{max}, and 5 minutes cool down) groups. Blood sampling was measured, one day before the first exercise session and 6 to 48 hours after the last exercise session. Data were analyzed by Pair wise T- test and Independent T- test. P < 0.05 was considered the significance level. **Results:** The mean of t-PA, PAI-1, Plasminogen, Fibrinogen, D-dimer, and PT increased in the aerobic group (p < 0.05). But, PTT decreased significantly (p < 0.05). There was no significant difference in main fibrinolysis and coagulation factors in control group (p > 0.05). There was significant difference between aerobic and control groups after 8 weeks exercise in above factors (p < 0.05). **Conclusions:** The current study suggested that submaximal aerobic exercise can modulate the most of blood hemostasis factors. Aerobic exercises with an intensity more than 50% of HR_{max} and duration of above one hour can improve body mass index and then can control the balance of fibrinolysis and coagulation factors.

Key words: Submaximal aerobic exercise, Coagulation Factors, Fibrinolysis Factors, Obesity, Low-Mobility.