THE EFFECT OF A SESSION OF THE PHYSICAL EXERCISE ON BLOOD SUGAR CONCENTRATION IN MALE STUDENTS

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The purpose of this semi-experimental investigation was to determine the changes of blood sugar concentration following a certain physical workout in male students. The subjects were 15 healthy fit male students engaged and experienced different physical activities and sports for more than 3 years. The mean values of age, height and weight of the subjects were $23 \pm 1.22$, $172 \pm 4.14$ and $65 \pm 3.1$, respectively. The workout consisted of a session of different aerobic and anaerobic exercise such as stretching, running, calisthenics, jumping and weight training. To determine the changes of blood sugar concentration, 10cc of blood samples were taken before and after the exercise training. Data Analysis have been showed by using SPSS software and paired – sample t test. The mean value of glucose before and after exercise was 74.33 and 81.33 mg/100ml respectively. This results indicated that the blood glucose level have been increased by 5 mg/100ml following the exercise test.

The statistical results indicated a significant difference between pre and post blood sugar concentration (P<0.05). In other words a session of exercise program had a significant increase in blood sugar level in subjects. The reason for this could be the opposite effect of glucagons (in compare to insulin), which causes the glucose mobilization from the liver through glucogenolysis and gluconeogenesis, and fatty acid from adiposities. During exercise in which both glucose and fatty acids are needed as metabolic fuels, glucagon has been shown to increase and insulin to decrease.

Regular training enhances the ability catalyze lipid. During constant load, prolonged exercise (such as physical workout in this study) the energy derived from lipid oxidation is significantly increased following aerobic training with a corresponding decrease in carbohydrate breakdown. This carbohydrate sparing adaptation may result from a release of fatty acids from adipose tissues.

References:

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